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No. XXXII---Farther Glimpses of Norfolk.

If there was any where an excuse for prolixity or repetition in these notes, it might perhaps exist with reference to the agriculture of a County in which such results are obtained as those we have already seen crowning the labors of the farmers of Norfolk.

The last stage reached in the course of this narrative left me at Elmham, not quite an hour and a half by rail, northwest from the city of Norwich,—where, notwithstanding what I have just written, I think there will be room enough for quite an outline, without retracing our steps over any of the ground already traversed.

The home farm of Lord SONDES, cultivated under the management of Mr. FULCHER, consists of about 800 acres. It may be remembered that Nos. 16 and 17 in this series, contained some account of the estates of the same nobleman in the county of Kent, where the property is in the hands of tenants. Here at Elmham, the establishment includes quite extensive "preserves," where pheasants and partridges are not only protected, but, as we shall presently see, actually bred and cared for at considerable expense and pains; and I understood that the proprietor, with a kind of generosity not always found in the land-owners of England, had retained for his own farming, most, if not all the land by the cover-side, renting only those farms that are thus least exposed to ravages from the sportsman's pets.

A Breeding Herd of Suffolk Polled Cattle.

Prominent among the objects of interest to me were the red polled cattle, to which I have before alluded, and which are here bred with more than usual care. The counties of Suffolk and Norfolk both appear to claim the privilege of godfather to the breed, but as I have already spoken of them under the former name, it may be as well to continue it.*

It should be remarked however, that Martin ascribes the remoter origin of the breed to the Galloways introduced into these counties for feeding purposes, but modified by crossings and interbreedings, until "their chief qualifications are as milkers, rather than feeders; although, in this latter respect, even the lean cows when dried show no little of the properties of their Galloway progenitors."

Norfolk was in fact formerly quite a dairy county. Mr. Fulcher spoke of the important rank which butter once occupied there as a farm product. But circumstances have combined to "change all this;" feeding has wholly usurped dairying, and, as a consequence, other breeds have somewhat thrown into the shade one, which, as it seems to me, would be—wherever milk as well as beef is an important object—quite as well worth the trial as any which we have yet obtained from the British Islands.

To sustain this opinion, which I first formed from what I saw and heard of the stock at the Suffolk Show at Ipswich, and at one of the farms in that county to which Mr. Crisp kindly accompanied me, I should add that, according to Mr. Fulcher's statements, the cows of this breed will continue in milk eleven months out of the twelve, giving from four to six gallons per day when fresh. Martin quotes two writers, one of whom estimates 168 lbs. of butter, and the other 184 lbs. as the fair annual yield of one cow in a year, and adds that an average between the two statements is probably not far from the truth. Mr. Fulcher moreover remarked, that a bullock would weigh from 6 to 7 cwt. at two years old, when fed for the butcher, and often more; when he could spare any from his Suffolk herd for feeding, he could put them up to graze at the age mentioned and sell them at two and a half, when he could obtain "a penny a pound" (2 cents) more for the beef than for that of a pure Short-Horn. If I do not misinterpret a further memorandum partly obliterated, he mentioned having slaughtered these bullocks at 50 stone, (720 lbs.,) and Martin has the following paragraph: "When dried, the Suffolk polled cow acquires a good condition with considerable rapidity, and fattens to forty or *forty-five stones;* the meat is of good quality—that, indeed, of the ox *very superior.*"

The herd of Suffolks at Elmham was a breeding herd, and several of the animals were so fine that I should much like to have procured an accurate drawing of them for publication, while as there is nothing of the "fancy" in the prices at which they are held, if any friend had commissioned me to select for him some kind of cattle that would be both novel and serviceable on this side of the water, I think a young thing or two from Lord Sondes' establishment would have certainly had an invitation to America.

* I am the more inclined to style this breed the "Suffolk polled" instead of the "Norfolk," because I find in the interesting survey of Norfolk Agriculture by Nathaniel Kent,—a copy of which, printed in 1796, is now before me,—that the author speaks particularly of the "introduction" of the "SUFFOLK polled cow" as then becoming quite general; he styles it "certainly more profitable" than the previous stock of the country, and says that since its introduction "from Suffolk" the credit of "home-bred" animals "is much increased."

Jno L Tappan

Stock for Feeding---The Sheep.

There were about a hundred head of cattle on the place, and nearly 1,200 sheep. Some of the Norfolk farmers, mainly those on the light lands, keep breeding flocks, and produce lambs—principally, as I have stated in speaking of Suffolk farming, from the Suffolk black-faced ewe as the female parent, with a Leicester sire. The breeders dispose of the lambs at Norwich market, or in other ways, when from four to five months old, at from $5 to $7.50 per head, according to their quality and the state of the market. The best of them, fed during the winter, sell the April or May after they are one year old, for from $12.50 to $15—having been clipped first, occasionally as early as Feb. 15th, so that part of the price named is for the wool aside from the sheep itself. The preceding spring, for example, I understood that Mr. F.'s sheep sheared 10 lbs., which at the price there paid for the wool, about 36 cents per lb., would diminish the butcher's price for the fat sheep some $3.50 upon the above figures.

If for wool and all, as above stated, the sheep are made to net the feeder $7.50 per head above their cost, it was estimated that two-thirds of this sum would have been paid for the oil cake they had eaten, while out of the remaining $2.50 is to come the attendance and provender they have also cost. This goes to show that Mr. Reed was not incorrect in calling it "an expensive style of agriculture" which one finds in Norfolk.

The custom in buying bullocks, I was told, was for the feeder to pay in the neighborhood of $1 (4*s.* to 4*s.* 6*d.*) per stone (14 lbs.) for the estimated weight the "beast" will attain when ready for market, and my informant added that if the price obtained by the feeder on selling reached 8*s.* per stone, the gain was scarcely enough to pay the cost of feeding, which may be estimated at from 8*s.* to 10*s.* per head per week—the cattle being bought toward the latter end of October, in tolerably good condition, and fed, say six months, at the rate of say seven pounds per day of oil cake, not infrequently receiving much more than this amount.

It was to the South Down letting of Mr. Webb that I was indebted for the acquaintance of Mr. Fulcher. He had there hired the use of a tup for the season, paying for his services the sum of 35 guineas. This would add 5*s.* or 6*s.* ($1.25 to $1.50) to the cost of every lamb he would be likely to sire—but the expenditure was still thought an expedient and reasonable one.

Preparation for the Wheat Crop.

It is a general practice in this part of Norfolk, I was assured, to spread the "muck," as farm-yard manure is there termed, as soon as possible after haying, upon the clover ley, where it remains exposed until plowing in October; although contrary to received theory, this is regarded the best preparation for the crop of wheat, and if muck enough is made to provide half the wheat with a thorough dressing of the kind, the farmer considers himself fortunate. This statement agrees with that made in Mr. Read's essay; he says that "formerly all the manure that could be made on the farm was needed for turnips; now a great breadth of roots is grown with artificials, leaving a large portion of the farm manure to be applied for wheat. It is *placed on the ley-ground directly the hay is off*, or before the land is plowed for wheat in the autumn."

When there is not manure enough for the wheat, Mr. Fulcher said that the deficiency was made up by the application of about two cwt. of guano per acre plowed in on the clover stubble—the sward being turned in as heavy as possible. In the spring, wherever the wheat is not sufficiently luxuriant in appearance, about half a cwt. of nitrate of soda mixed with double this quantity of salt would be applied with a machine, for which purpose what is called "Chambers' broadcast distributor" stands in high esteem. Corroboratively, Mr. Read states that experience proves it more expedient to employ nitrate of soda than guano as a top-dressing, "for, while one takes no sort of harm from the cold dry winds, the other loses much of its virtue when so exposed."

Thirty to forty cubic yards of clay are applied to the light lands once in ten or twelve years, and without this application wheat could not there be made a profitable crop.

Other Regular or Occasional Crops.

It has been before mentioned that owing to the recent prevalence of decay in the turnip crop, the growth of mangolds in their stead is generally on the increase. Mr. F. thought that one-third the root crop of the county was now mangolds; according to the estimate made in 1854, already given, there was but about one-tenth the area in this root compared with that occupied by turnips, so that the change during five years becomes at once apparent. The mangolds, on account of the frost, have all to be dug and covered with earth; this labor is entered upon as soon as wheat sowing is over, and costs from 10*s.* to 15*s.* per acre. Moreover upon turnip land, the sheep are fed during the winter, receiving daily rations of oil cake, and to supply the place of this dressing which the land does not receive when mangolds are grown, it becomes necessary to sow in this case two cwt. of guano per acre as a preparation for the ensuing barley crop.

A bite for the sheep in May is often obtained by sowing upon the wheat stubbles four bushels per acre of rye as soon as possible after harvest. Here the sheep are folded at night during the month named, the result of which is beneficial to the roots which follow next in the regular order of the course.

It is already known that Norfolk farming has found, in the apparent repugnance of the land after a certain length of time to the production of clover, an almost insuperable obstacle. Mr. Fulcher was in the habit of sowing a peck each of clover seed and rye grass per acre, with 3 or 4 lbs. of white clover, so that if the first should fail, the second would give a crop, although wheat does not follow rye grass very kindly. Clover is also alternated with trefoil, so as to come but once in eight years, and, finding it an uncertain experiment even at this interval, it is becoming more and more common to introduce another alternation of sainfoin, "taken up at Michaelmas for wheat, just as clover would be," so that the same field is only sown to the latter once in twelve years, instead of four or eight as before. The sainfoin is *drilled* at the rate of three or four bushels of seed per acre, and is thus a more expensive crop to raise.

Salt is extensively applied as a manure for mangolds, most frequently together with guano, and benefits them both with regard to weight and quality. Mr. Reed thinks that on light lands in seasons of drouth, it appears to absorb moisture from the atmosphere, or aid in retaining that which the land already possesses. He speaks of the use of from 3 to 5 cwt. per acre.

Inroad upon the Gamekeeper's Domains.

Forsaking practical topics for awhile after punching the sides of the Suffolk cattle, my conductor drove me to see

the wooded portion of the estate, which embraces perhaps 160 acres, yielding a regular crop of much importance in the husbandry of a county like Norfolk. It is mostly of *hazel*, of which about 20 acres are yearly cut over for *hurdle-making*, so that a crop of this sort is here produced about every eight years. The gamekeeper piloted us to an open space where there were between 30 and 40 coops of young pheasants, under the maternal care in all cases I believe of the ordinary domestic fowl. I was told that the keeper is paid 2s. (nearly 50 cents) apiece for all he raises, paying himself the cost of feeding, which is a large item for four or five hundred young birds with a good appetite. Immense numbers of boiled eggs are used, and this with barley and scraps constitute the chief items in their bill of fare.

The quantity of game, including under this head—beside pheasants—partridges, rabbits and hares, although the two latter are sometimes classed as "vermin" by those who suffer from their rapacity—fostered in such preserves, is immense. The numbers killed in the shooting season, too, are very great, and I was told that it is quite customary for landlords, after enjoying this sport with friends, and making presents of the other kinds of game they slaughter, to reserve the pheasants carefully for sale. They command from $1.25 to $1.50 per brace at market, and as they are bred by artificial means involving much expense, it is thought just and proper that they should be made, if possible, to pay their way wholly or partly—an arrangement of which previously I had no expectation, having always supposed the production of such birds to be entirely a matter of luxury and amusement, instead of one verging upon the character of any other business transaction.

Through the fields of tenants and others, it is quite common to see every dead furrow occupied with a drill or two of *buckwheat*. It is sown by the landlord, to furnish provision for the partridges, who are very fond of this grain.

As children, we have shuddered at the old English custom of gibbeting criminals in chains, associating every gloomy cross-road with the ghosts of highwaymen and murderers, and the clanking of horrid irons, swinging with their burden of lawless and outlawed humanity in every sudden breeze that rustled through the leaves. If happily these sights are no longer found in our day, criminals of another sort are still the subjects of a somewhat similar posthumous exhibition; every kind of winged or quadrupedal foe with which the gamekeeper has to contend, is hung upon some convenient tree, or elsewhere impaled as soon as shot, a testimony to his vigilance and prowess, as well as answering as a warning, it is to be hoped, to their marauding comrades.

The Allotment System.

Among numerous other points of interest, there is one to which I cannot forbear referring, even at the risk of rendering my chapter too long. What is termed the *Allotment system*—that is, the letting to laborers, or "cottage tenants," of small pieces of land for their own cultivation in out-of-work-hours—has been practiced extensively by Lord SONDES, and is an additional proof of his efforts to fulfil in the largest sense the duties of a proprietor and landlord.

It is scarcely necessary to argue at length the advantages which can but result from the occupancy by the workingman, of a tract of land where his own family may feel themselves at home, where the labors of all may be employed to good advantage, and where, when free from other obligations, he may usefully spend his own time *for himself*, instead of wasting it at the ale-house, or in that idleness which is perhaps equally as unfavorable to the good temper as Mr. Watts thought it to the morals of a family.

The only objection that I have heard urged to the application of this system to farm labor, is that, while it affords for mechanics occupied in-doors, in cities or villages, an agreeable change in air and in the kind of toil, to those employed in farm labor it is only a continuance of the same tasks, in the evening which should be a time of rest, at which they have been toiling all the day. This is true, in some measure, but is of little force, it seems to me, from the reason that a laborer with a family is supplied with the means of utilizing the time of young and old *at home*, instead of allowing his wife and children to work for others, while, unless in some particular times, the labor upon a quarter or half an acre can scarcely prove burdensome to him and them in comparison with the value of what it yields.

The latter (half an acre,) is the size of Lord SONDES' allotments, and his experience in the matter was such, I understood, as to warrant the highest commendation of the system. We saw certainly as flourishing crops upon these plots, as I anywhere found; the tenants pay promptly their rent, as an almost uniform rule; and, although there is always some opposition on the part of interested parties to the adoption of a plan involving such changes, it has now been in successful operation long enough here to test it pretty thoroughly. To show the kind of restriction under which these tenants lease their holdings, I have thought it worth the while to copy below the lease and covenants just as they are drawn up, for the privilege of presenting which, I am indebted, with other favors, to Mr. Fulcher's attention:

TERMS AND CONDITIONS OF TENURE under which the cottage tenants of the Right Hon. George John Lord Sondes, hold their respective occupations in the County of Norfolk.

The rent to be paid by four equal quarterly payments, (if demanded,) that is to say, on the Sixth day of January, the Sixth day of April, the Sixth day of July, and the Eleventh day of October in each year, and if not previously demanded, the whole rent due to be regularly paid on the Eleventh day of October.

The landlord reserves all marl, brickearth, gravel, sand and stones, fruit trees and bushes, (but not the fruit thereof,) and other trees growing on any of the fences, gardens, borders, and premises.

The tenant to cultivate the gardens in a good and husbandlike manner, also to clean and brush the hedges, and to keep both free from weeds, and the vegetables growing in the garden to be left at a fair valuation for the succeeding tenant.

The tenant not to under-let, or take in lodgers on any part of the premises.

Three months' notice in writing given by either landlord or tenant, on one of the above named quarter days, shall be a sufficient notice for the tenant to quit, and deliver up possession of the cottage, garden, and premises to the Landlord or his agent on the next quarter day following the receipt of such notice.

—— —— is this day, admitted tenant of the cottage, garden, and outhouses, called —— situated at ——

The rent of the above named holding be at the rate of —— pounds, —— shillings, —— pence a year, and to commence from the —— day of —— 18—

I hereby agree to pay the rent, and to perform the covenants and agreements hereinbefore reserved, and to quit and yield up possession of the occupation on receiving the notice herein agreed to.

Dated this —— day of —— 18—

COVENANT ANNEXED.

The occupation of the Allotment not to interfere with the weekly labor, but to cultivate at leisure hours, before or after the day's work of his master by whom employed; and on no account shall any labor be done on a Sunday.

The occupier to pay poor's and surveyor's rates.

If any occupier be convicted of felony, or offence against the laws of his country, he or she shall be immediately dispossessed of his or her occupation.

The occupier to farm and crop in such manner as may be most beneficial to himself, without taking two corn crops in succession; but the four-course system is recommended.

The portion of land where wheat shall have been grown, to be properly cleared of foul grass as soon as can conveniently be done, between the Michaelmas and Christmas day following.

Summer weeding, to prevent seeding, be strictly attended to.

The straw grown on allotment to be made into muck, and expended on the same; but on giving up the said allotment, the straw to be left thereon for the use of the landlord.

The rent of the said allotment to commence from the 11th October, 18—, at yearly payment of £—— with the addition of the aforesaid rates.

The said yearly rent and rates to be paid and cleared up on the 11th October in every year; and in case of default the land to be forfeited.

It will be seen that there are fewer restrictions and obligations than many English landlords would have thought necessary, but enough I was assured, to protect sufficiently the interest of the proprietor. I had made some further memoranda that might have served to complete the foregoing statement, but cannot now find them, and enough has perhaps been said to show the general working and design of the arrangements referred to. Upon the Norfolk estate of Lord Sondes, there are 160 allotments of a half acre each, let at the moderate rate of £3.00 per year for the land. The rent of the cottage is about £3 (say $15)—from 1*s.* per week, upwards. The carrot is quite a favorite crop on these allotments—Lord S. sometimes purchasing for his own use 1500 or 2000 bushels of them per year from his cottage tenants, at the rate of about 4*d* per bushel.

I am forced also to close for the present, with no more than a passing allusion to the pleasant grounds and fine gardens attached to the plain and substantial mansion which constitutes Lord Sondes' residence. It is not only here, moreover, that my obligations are heavy to the kindness of Mr. Fulcher, as now imperfectly acknowledged, but the columns of the Co. GENT. have before contained the record of a visit in the south of England, above alluded to, marked by similar courtesies on the part of his lordship and Mr. NEAME, the manager of the Kent estate.

FEEDING LEAN CATTLE FOR BEEF.

Conversing with "A Young Farmer," on the above subject, he asked us, "At what time in the year can one best and soonest fatten lean stock?" Having no very extended personal experience in the matter, we gave him the views of some who have long made it a business to supply butchers with fattened stock, and our own opinions as made up from these and other sources.

We must first remark, that well-kept, good conditioned stock, unlike those which are lean, can readily be fattened at any season of the year by extra feeding, and generally with profit. Lean cattle are not readily started in growth —they cannot be fed high with safety or economy. They must be fed moderately at first, and at the most favorable season of the year, to gain in size and weight with the smallest amount of grain and care.

A well known stock-feeder says, "No farmer ought to buy lean cattle to fatten in winter. They should be fair beef to begin with." But while stock are kept in the way a large majority of farmers keep them, plenty of lean cattle must be fed for beef, if not profitably, then unprofitably. That it would be better for the farm and the farmer to keep all stock at all times in fair order, can scarcely be questioned. Their value would be double what it now is, at no real increase in expense of keeping. We trust the improvement now manifest in this respect, will go on until good keeping shall be the rule instead of the exception, as is now the case.

But to return to the feeding of lean stock. We are inclined to think spring by far the best season to bring them most readily and cheaply into good condition. Commence feeding grain—only a small quantity at first—as soon as grass starts so as to give a fair bite in the spring, and keep in the stable at night with plenty of good hay before them. It depends a great deal on the character of the pasture as to the best time to turn stock upon it in the spring. Clover and timothy are materially injured by feeding too early; while June grass, white clover, and various other indigenous grasses, can be moderately fed, especially on low and rough pastures, at an early stage.

If any thing will give cattle a start in condition, combined with fresh grass and good hay, we think oil-meal, mixed with other meal and fed daily, will do so. We have been surprised at the rapid improvement of a pair of two-year old steers, lean enough when turned to pasture, which have been fed daily for less than three weeks, a quart of corn and barley-meal each, ground fine, with the addition of half a pint of flax-seed husks, (it having been skinned by the mice.) They have good pasture, but have been kept without hay—and indeed had very little besides straw and stalks through the winter. Eight weeks feeding, consuming about one bushel of meal each, will fit them for sale, and ease the demand for pasturage during the heat of summer, though no doubt it would pay well to keep them growing in size and fatness for six months or longer.

An experienced farmer of Central New-York, says that "a bushel of corn-meal fed to an animal when being turned from hay to grass, is worth three dollars." Taking the gain in flesh from such treatment into comparison with the loss in weight which would be incurred without the grain, (and hay at night,) the estimate is no doubt within bounds. It is more difficult to get stock from hay to grass without loss, than many imagine, and we should be glad to publish, more largely, the experience of our farming friends on the subject. Though not immediately connected with beef-making, we must add the remark, that milch cows very much need this hay at night, and a regular feed of grain or roots once a day, for a month at least after going to pasture. It will be the most profitable attention we can give them. B.

NEW APPLE-INSECT.

MESSRS. EDITORS—I have been this morning examining my young orchard, which has been set, a part four years, and a part three—with a few trees that have been filled in this spring in vacancies. I find a few trees killed by the winter as I suppose; but the worst of all is about ten or twelve, which were set this spring, that have been destroyed by an insect of some description, by eating out the buds; and some limbs on my trees that have been set four years, have been served in the same way. I enclose four of the buds taken from a tree that has been set four years, that you may see the way they have served me. A neighbor of mine told me that he lost over four thousand last year of young seedlings one year old. He told me that a worm similar or the same as the cut-worm in our corn, is what destroyed his.

Now I wish you or some of your numerous correspondents, would tell me how to prevent them from destroying my trees another year. I think their work is finished this spring. The trees that have not been already destroyed, have got too far advanced for them to do much injury to.

Plattsburgh, N. Y. A SUBSCRIBER.

We have no knowledge of this insect, nor do we find a notice of any quite like it in either Harris or Fitch. There are some insects that destroy the center of the buds and draw the outer leaves together with a web and form a nest; but no web nor nest was found in these specimens. This depredator appears to have known just where to find the most delicate morsel for his food, and has accordingly eaten out clean the center of the young bud, while yet unexpanded, and perhaps not swollen over a fourth of an inch long. We should think it must be a smaller grub than the common cut-worm, as the cavity eaten out is only about a twentieth of an inch in diameter. Its work appears to be quite similar to that of the *Haltica chalybea* or grape-vine beetle, which treats the buds of the vine in the same way. If our correspondent finds the insects, we hope he will preserve them, and send specimens by mail in a small vial or quill to Dr. Asa Fitch of Salem, Washington Co., N. Y., and place others in a gauze cage, keeping them well supplied with apple-buds as food until they change to the pupa state, and to the perfect insect, sending these also to Dr. Fitch.

THE MOLE PLOW.

An experiment was lately made with Case's mole plow by J. Dunham, of Etna, Tompkins Co., N. Y., on the grounds of Robert B. Howland of Union Springs. Much interest having been lately felt on this subject, and having witnessed the experiment, we think our readers may like to hear the results. This mole plow is briefly spoken of in a communication on page 235, current volume of the Co. Gent. The statement there made of the amount of labor capable of being performed, appears to be correct. The machine was worked with ease by two horses attached to a sixteen inch capstan by means of an eighteen foot lever, the force being thus multiplied 27 times, and the double cable, running over a pulley, again doubling this power to 54 times. Estimating the friction at one-third, the actual multiplication of force would be 36 times—equal to a 72 horse power to move the coulter and its mole.

The experiment was successful. The subsoil was a strong clay, clear of stone—the kind of soil best adapted to this mode of draining. It made a smooth, clear mole about 4 inches in diameter, and two and a half feet deep. The coulter left an open slit in the soil about three-fourths of an inch wide, but the lower part was immediately closed by the pressure of the mole. The horses walking at the rate of three miles an hour, formed a drain at the rate of about five feet per minute, or 18 rods per hour. Allowing about half the time for removing and adjusting the machine, it will be found capable of cutting at the rate of 80 to 100 rods per day—this amount has been generally accomplished where the soil is adapted to its working, as in the present instance.

This modification of the mole plow (Case's patent,) is probably one of the best that has been used. Like Fowler's English drain plow, it is furnished with a vertical screw for altering the depth, as the surface of the ground may require, while it is much simpler and cheaper than that ponderous and complex machine—the entire cost of Case's is, we think, only $150.

For the first time, during this experiment, the attempt was made to draw tubular tile into the mole, like Fowler's mode, and was entirely successful. From 50 to 100 feet were strung at a time on a large rope, which was attached to the rear end of the mole. The work appeared to be performed in a perfect manner. About a hundred feet could be introduced at a time, when it became necessary to dig a hole down in order to draw out the rope, and introduce a new string. Hence there was more delay in this process than by simply cutting a mole. We cannot see, however, any objection to the use of a longer rope, so as to draw in at least two hundred feet of the tile, judging from the ease with which this was apparently accomplished. Three men, with this machine and one pair of horses, could undoubtedly introduce sixty rods of tile in a day, and possibly eighty rods. In this first experiment, from three to four were drawn in per minute, and twelve rods were finished in about three hours, including all delays and stoppings.

We had no opportunity of witnessing the effect of obstruction by stones. We were however informed that small stone was readily pressed to one side, and that the horizontal joint of the mole enabled it to pass to one side of larger ones. But where still larger ones existed, it was necessary to dig down and remove them, which of course caused much delay. Hence this machine is not adapted to stony ground. It is capable of cutting drains three and a half feet deep, although in the experiment but two and a half were attained.

In a stiff clay subsoil, we have no doubt that the mole, without tile, if three feet deep or more, would endure for an indefinite term of years. In a looser or more porous subsoil, tile would be indispensable. Our readers may easily estimate the cost, where a machine is purchased and large farms are drained; the wear and tear, cost of team, and of three men, being about five dollars a day, or a little over six cents per rod. For smaller jobs, the proprietor of the machine charges ten cents a rod, the farmer furnishing team and two hands, which is not any cheaper than cutting ordinary drains three feet deep by means of the new ditching plow, in connection with shoveling out by hand; but is much cheaper than the old mode of cutting drains wholly by hand. There is one advantage possessed by the mole plow which should not be forgotten—a meadow or pasture may be thoroughly drained from one side to the other, without ever breaking the sod.

Butter from Twenty-five Cows.

At the winter meeting of the Chenango Co. Ag. Society, in January last, the prize of $25, offered "to any dairyman in the county who will produce the most in value, in proportion to the cows kept, not to be less than ten," was awarded to Mr. JOHN SHATTUCK of Norwich, whose statement, copied from the Transactions of the Society, we annex:

To the Committee on Winter Premiums.—I wish to be considered a competitor in the Dairy premiums, and would make the following statement of the amount produced from twenty-five cows:

Whole amount of butter made,		4,601 lbs.
" " sold, 4,350 lbs. at 25c.,	$1,087.50	
" " used in family and on hand, 251 lbs. at 25c. per lb.,	62.75	
" " milk sold,	2.05	
One veal calf,	5.00	
Ten calves raised on skimmed milk, and sold at $5 each,	50.00	
14 Deacon Skins, sold at $1.10 each,	15.40	
1 pair calves on hand, value of increase,	12.00	
Whole amount of butter, cheese, deacon skins,		$1,234.70
Whole amount of pork made, 2,230 lbs., sold at $6.75 per hundred,	$150.52	
Amount of lard, 60 lbs. at 1s. per lb.,	7.50	
Total,	$158.02	
Deduct for value of hogs in spring, $28.00		
Amount of grain fed, 12.50		
	40.50	
Leaves a nett balance of,	[$117.52	117.52
Whole amount,		$1,352.22
Average per cow,		54.08

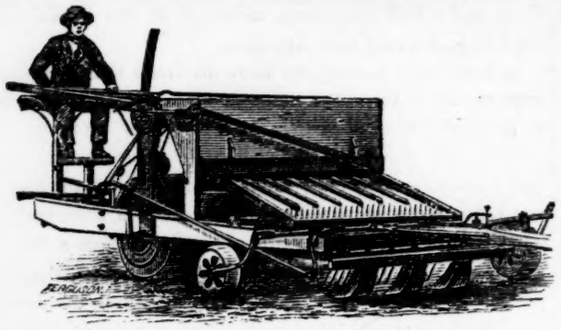
This average to the cow is without any allowance for milk or cream used in the family.

Statement of manner of making Butter.—The milk is set in tin pans, and allowed to stand about 36 hours in warm weather, when the cream is taken off and churned by dog power. Temperature of cream about 55° Fahrenheit. When the butter comes, it is removed from the churn, and washed in cold water until the buttermilk is removed, and then salted with Ashton salt, about one ounce to the pound of butter, and then covered tight and set in the cellar for 24 hours, when it is worked over and packed in firkins, being careful not to work it only just sufficient to remove the buttermilk.

Manner of keeping through the season.—I keep the butter covered with strong brine from same kind of salt used for salting the butter. Cost of making the butter is about seventeen cents per pound.

Manner of feeding Calves.—I generally let them suck the cow until the milk is good, and then commence feeding them skimmed milk on the start, letting it stand twelve hours at first, and as they grow older let it stand longer, and they will soon get so as to drink it sour and do well.

Manner of fattening Pork.—Last spring I had four shoats that would weigh about 80 pounds each, and I bought four pigs, and fed them nothing but sour milk and buttermilk from the dairy, until October, when I commenced feeding them a little soft corn, (I suppose you all know what that is this season,) not enough to destroy their appetite for the milk, and continued to feed in this way until butchering time. They consumed fifty bushels of ears valued at 25 cents per bushel,



DUANE'S SEEDING MACHINE.

The above cut represents a new labor-saving implement, invented by Col. J. B. Duane of Schenectady, of which a Schenectady paper says:

We witnessed on Thursday last, the trial of Col. John B. Duane's Sod Seeding Machine. As this is an entirely new implement in agriculture, and as on the trial all the purposes which it was built to accomplish were well, fully and satisfactorily answered, we shall make no apology to our readers for giving rather a full and particular account of what the machine is. But before attempting to do this, we must be allowed the privilege of at least hinting that the name chosen to designate the machine is not at all descriptive of its character; it will, it is true, answer an admirable purpose as a sod seeder, for which it is peculiarly adapted, but it is also fitted for so many other uses that a more comprehensive and expressive name should be found for it. The machine, then, is a combination in which the processes of cultivating the ground, sowing oats or other seeds of whatever kind, harrowing in the seed, sowing clover and timothy, rolling the land after sowing, and sprinkling plaster evenly over the surface of the ground, are all accomplished with ease at one operation by a two-horse team. The advantages to the farmer may be briefly stated thus:

1. It leaves the ground in a light and friable condition; as the team travels in front of the whole operation, the ground is never poached by the horses' feet after the crops are put in.

2. The Cultivator and Drag are so constructed that they *clear themselves* of all obstructions.

3. The driver and team go over the ground but once, while the ordinary mode of cultivation requires the ground to be traversed six times.

4. The seed is sown more evenly than can be done by hand. Oats, clover and timothy, in fact any seed, can be sown equally as well and with the same uniform evenness in a gale of wind. The construction of the seed-sower is such that the farmer can regulate at will its operation, and sow one peck or five bushels to the acre at his pleasure.

5. It covers the seed most perfectly.

6. It sows plaster with great evenness.

7. The driver can maintain his seat at all times on the box.

8. By dynamometer test, the draught is found to be about equal to that required for turning up the sod.

9. By the peculiar formation of the cultivator and drag-teeth, the machine is admirably adapted for the cultivation of newly turned sod.

10. A great feature in the machine is its power of freeing itself from any obstructions that may lie in its path, passing over them easily. The trial was made in a field from which a crop of broom corn was harvested last year, and in which the stalks were quite thick. In no single instance did it fail to free itself, nor was it any time so clogged as to need to be freed from these surface obstructions.

The inventor, Col. John B. Duane, after spending the best ten years of his life upon a large farm, became so impressed with the imperfectness of the implements in ordinary use, that he set himself resolutely to the task of inventing machinery which should overcome the tediousness of the operations of the farm. To this end he has applied himself with untiring industry for a year or so past, in developing and perfecting the machine which so fully vindicated his claim to the title of Inventor in the trial made on Thursday afternoon; so confident was he that the machine would perform satisfactorily all that he claimed for it, that he ventured upon a public exhibition after but one private test, and we are happy to record the unqualified success of the experiment.

There is one other advantage it would be reasonable to state, and which might not enter the consideration of some, that it will sow up and complete until a storm actually occurs, leaving the farmer under no apprehension that he cannot cover all he might sow on the appearance of a storm.

[For the Country Gentleman and Cultivator.]

USE OF THE MOLE PLOW.

Messrs. Editors—In answer to your Iowa correspondent, I would say that I began last year to use the mole plow. Our first attempts were in a measure failures; but after becoming a little skilled, we succeeded to perfection, the underdrains still working. Mr. Trimble of Highland, O., underdrained last year 230 acres with mole plow, and claims 20 bushels corn on the acre increase, making 4,600 bushels corn in favor of its use in a single season. Edwin Reed, Huron Co., O., underdrained ten acres last year, still operating well.

This mole plow is so constructed that it is self-holding, drawn with team adjustable to any required depth—easily drawn back in case of obstructions, and course changed, so that land must be very stony to prevent its successful use. When no obstructions occur, with sufficient team it can be drawn with the same speed as the ordinary plow. On prairie lands from 10 to 18 miles can be made in a day. I could multiply testimonials if I felt warranted in taking up space—shall be willing to answer any communications by letter or otherwise. H. R. Jerome.

Monroeville, Huron Co., O.

Eds. Country Gent.—I notice that an Iowa subscriber or correspondent, wishes the opinions and experience of farmers in reference to the mole draining plow. Having had some experience myself as well as observing the operations of others, I will here give my opinions for what they are worth, if worth anything.

Several machines have been constructed in this city and vicinity by various persons, and most of them have received a patent therefor. The most prominent of these I have examined. Two years ago, while mole plows were a new thing in this section to most of us, myself and several others made a trial of their work. I had some 300 rods of this ditching put in, on what might be called a level prairie, but having a slight descent. This was put in the wet year—with us in Illinois, (two years ago.) I was highly pleased with its operations for a time, as it discharged finely until late in the fall, when it ceased, as I then supposed from want of water in the ground, the rains in the latter part of the season having ceased, and the ground being comparatively dry. Early the following spring it was for a short time very wet, and I looked in vain for my drain to discharge the surplus water that I knew must lie in the ground; but it did not discharge a drop to my knowledge. With this, I came to the conclusion that my drain had filled up so as to obstruct the passage of water.

My drain was put down from 3½ to 4 feet below the surface. It was put in with a machine not regulated for the elevations and depressions of the surface; consequently the moulding and all, made my drain as varying as the surface from a level.

Since this time, these machines have been very much improved, in such a way as to keep the mole at a certain depth in the ground, no matter how uneven the surface, thereby having no ups and downs in the drain, which is far preferable, as all angles in the drain are acted upon by the water more or less, having a tendency to block the drain, as I think was done in my case. The conclusion I arrive at, after observations in my case, and I can bespeak the same of others in my vicinity, are these:

That the mole machine will work and give satisfaction when operated in a slough where there is water to discharge all the season round. I know of instances of this kind, where the water has been taken to water stock, and the drain has not yet failed, although sunk some five years since. But I do not think it of any use to run this kind of a drain where the water will be likely to run but certain times in the year, as I am of the opinion that after the water has ceased to occupy the drain, that it (the sides of the drain,) begin to dry and flake off into the drain, and ultimately close it so as to stop the passage of water, as in my case.

Perhaps others may have been more fortunate with theirs. If so, should be glad to hear from them. A. P.

P. S. I would say to Frank Bassit, that I operated with a piece of ground likely to bake in wind and sunshine by plowing deep, and at the same time ridging as much as possible in lands not over 40 feet in width. My dead furrows are 20 inches lower than the back furrow, and I have no hesitation in saying that this piece of ground is as porous and in as good condition as is usually seen. A. P.

Galesburg, Ill.

[For the Country Gentleman and Cultivator.]

Importance and Value of Manure.

Near Geneva, 21st May, 1860.

Messrs. Tucker—Some years ago I had an article published, I believe in the Genesee Farmer, about the waste of valuable manure made by cattle and hogs at the distilleries, which is almost in all cases, washed into the stream or river on which the distillery is situated. In the article alluded to, I offered, if any farmer living near a distillery would get from 12 to 20 loads, and put it on an acre of ground as directed, for either grass or grain, (if his land was not already rich enough,) if it did not pay for his labor and expenses in his first crop, that I would pay him for his labor in getting the manure. I never heard from any one on the subject.

I have a farmer friend who lives at no great distance from a distillery where a large number of cattle, say some 400, are kept and fattened, from five to eight months in the year, besides many hundreds of hogs. This farmer was often complaining to me that nothing could be made at farming on such land as his, but on such land as mine a man could make money. I knew this to be nonsense, as his land naturally is as good, and I think better than mine. When I bought mine, one acre of his would have been valued higher than two of mine.

When he complained about the unprofitableness of farming, I would tell him he did nothing to improve his farm, only putting on manure made from straw. In that way he only got straw in return; he must have something better than straw manure to make grain, seeing the virgin soil was exhausted. I asked him why he did not draw some of those thousands of loads of manure that were washed into the river from the distillery every year? Oh, he said, it would never pay. I asked him how he knew, when he had never tried it, and told him that I was confident that it would pay me, if it was as near me, and told him if he would try 20 loads on an acre, if it did not pay the first crop, in either grain or grass, I would pay the expense. After much talk on the subject, I got him to commence drawing in winter to manure ten acres, the worst part of his corn field; and now for the result. That ten acres produced 30 bushels ears per acre more than the unmanured part, and more than double the quantity of stalks, and you must remember that the manured part was the highest, and by far the *stiffest* clay soil; besides I don't think he gave it a fair chance in testing the difference between the manured and the unmanured, as he took the five rows adjoining the manured part, and five rows of the manured, and the manured part being the highest land, part of these five rows undoubtedly got some benefit from the manured five. When drawing the manure home the first year, as almost every load passed, I understood he said, there goes another shilling, the price paid for having it taken out of the stables. But last winter I was told he drew enough to manure 25 or 30 acres fully, and when the teams were passing his house, he would say, "there goes the *gold*."

The difference between the good and bad farmer lies in the making good or bad manure, if the land is dry. When I first came on this farm, and my neighbors saw me heaping and gathering all the dung I could, some of them would ask me if all the old country folks liked as well to work among manure as I did? I told them that all those that made anything by raising grain did. Some said they would rather do with less grain than work *that way*.

John Johnston.

FIELD CULTURE OF THE ONION---II.

Gentlemen—In a late communication about the culture of the onion, I concluded by promising to add a a few observations about *harvesting* and *marketing* the crop.

After the onions are tolerably grown, their tops fall and wilt a little; at this period they are pulled and thrown together in beds of about a dozen rows in each; here they are permitted to lie about one week, when they are collected and taken under cover, generally to the open barn floor. Here they are sorted and cleaned of all refuse material, and laid away to be barreled or taken in bulk to the market, which is generally found at Boston. Sometimes a dozen or more wagons will start together early in the morning, so as to be on hand to deliver as soon as the purchasers are ready to receive them. Others barrel up the onions, and hold on upon them until they command the highest price of the season. About 3½ bushels will fill a common flour barrel. The price per barrel has lately ranged from $2 to $4—and the product per acre has been from one to two hundred barrels, according to the quality of the land, the quantity of the fertilizers applied, and the industry used in the cultivation.

These are the general features relative to the culture of our onions. I speak of what was before the *devourer* came in the form of the *onion maggot*. When this appeared the onion died, or nearly so. This insect is grown in this manner. A small, light colored fly is seen fluttering about the onions as soon as they are fairly out of the ground and beginning to be seen in rows. This fly deposits its small white eggs near the bottom of the plant, whence springs a worm that insinuates itself into the growing plant, and eventually into the bulb as it enlarges. It is not uncommon to find a dozen or more of these maggots or worms in a single bulb, and wherever they go they are *death and destruction to the onion*. Whether they are limited in their operations to the plant in which they orig inate, or whether they migrate from one plant to another, I am not advised, but think it probable their operations are limited to the plant in which they originate. Nevertheless, I have known them so numerous as to destroy the entire crop on fields of several acres.

For *three years* last past, 57, 58 and 59, they have been a serious obstacle in the way of this culture; so much so, that many cultivators have contemplated giving up the growing of onions. Unwilling to do this, others are holding on, hoping for "a better time coming," flattering themselves that their dreams of imaginary wealth from fancied crops of onions, are not so soon to be disappointed.

South Danvers, Mass. J. W. Proctor.

P. S.—It may be remarked, in connection with the culture of the onion, that it affords a convenient employment for the young, both *boys* and *girls*. In the season of weeding there is a demand for all the laborers that can be obtained. Well trained boys, from 12 to 16 years, will do as much as men, and are glad to work for half the price of men. The shrewd calculator who has an eye to the windward, is careful to avail himself of this advantage. The same is done after the crop is gathered to the barn, by employing girls of these ages to sort the onions. I have heard young girls when thus employed, say they could earn *fifty cents* a day by sorting onions at *one cent* per basket, holding a bushel. This was before they began to mount their *crinolines*—with these of full dimensions, I think it would be as difficult for them to approach the pile of onions, as it is for a man of 240 pounds to engage in weeding them; and this *I know* to be almost impracticable.

EDITORIAL CORRESPONDENCE.

GREENFIELD, FRANKLIN CO. MASS., June 8.

With the view of spending Wednesday at Brattleboro', as intended when I left home, I have also had the pleasure of accomplishing a long cherished purpose to see something of New-England Agriculture in this part of the Connecticut Valley. My letter at this late date must not be as long as I should like to make it, and I can therefore only note down as concisely as possible some of the earlier gleanings of the past three days.

Upon the invitation of FRED. HOLBROOK, Esq., an early contributor of our own, and long the President of the Vermont State Ag. Society, a little party assembled day before yesterday to witness the trial of what has been named the "Universal Plow." It is the result of much time and labor expended by him during a number of years upon the problem of improving this important implement, and although it has now been in use to some extent in this part of New-England for two or three seasons, Mr. H. has, I believe, from time to time been perfecting its details, and a description of what is now attained will probably be new to most of our readers.

THE FIELD.—The trial took place upon the farm of RICHARDS BRADLEY, Esq., near Brattleboro', on a meadow in admirable condition for plowing. Mr. HENRY BROOKS, of Acton, Mass., was the plowman—a winner of numerous prizes, I understood, in this department of agricultural exertion, and under whose management nothing but a good plow was necessary to render the work all that could be desired. The first operation was in turning over the sod upon a part of the field that had lain in grass five years—soil a clayey loam, verging in a narrow strip across the furrows, upon a more sandy character; no stones; probably never plowed before deeper than six or seven inches.

THE PLOW.—The idea of the Universal Plow is to furnish a skeleton, accompanied by a series of changeable castings, such that the farmer can either select any one kind of the latter for a particular object, or by choosing three or four, obviate the necessity of purchasing and storing just so many complete and separate plows. The number of mould-boards provided is 12, forming an "intervale" series, flat furrows of five sizes, an "upland" series, also flat furrows, of four sizes, one "lap furrow" mould-board for stiff clays, and two "stubble" or old ground sizes. By adding to the last mentioned a small forward or "skim" plow, we have also two "sod and subsoil" sizes. The above require three changes of land-side shoe, of different lengths. By the use of steel in the share, land-side and mould-board, the same implement is employed for breaking up bog and prairie.

As already intimated, it is not supposed that a single purchaser will be likely to want it for the whole variety of uses to which it may be put, but the object has been to make it take the place of several of the different sorts which otherwise he would have to procure separately. One farmer, for instance, who was present, remarked that he had seven plows, but with this he could dispense with four, only retaining beside it, I think, a one horse corn plow, and a side-hill reversable one.

THE TRIAL.—With this preface I can more briefly refer to what was actually done in our presence. The beginning was made with two fine yoke of oxen before the largest size of "intervale flat furrow," opening the first furrows 8 inches deep and 16 wide, and then set to run an inch still deeper and two inches wider. This was going below the depth to which the soil had been previously plowed, and the newly inverted subsoil would shell off slightly in turning; otherwise the furrow slice was laid over very handsomely, its surface, as finally exposed, seamed and cracked, and ready to pulverize under farther cultivation. Next came a smaller size, intended for three cattle, or "four cattle light," which was put in about seven inches by fifteen. Thirdly, we had one yoke of oxen before a still smaller size, running six inches deep and twelve or thirteen wide. The "intervale" plow, it should be added, has a wheel ten inches in diameter, and the same is also used upon the "sod and subsoil," but the "bog plow," of which we shall speak later, had a smaller and broader one.

The trial of the smallest size "sod and subsoil" proceeded after a change of mould-board, the removal of the coulter, and the addition in front of the small "skim" plow. The mould-board here employed differs in principle from that upon the "intervale" plow, being the same as is used for the upland or "stubble" plow—making a shorter twist, and throwing the ground over so as to break it up finely. The depth cut was eight to nine inches, and the breadth about eleven—the sod cut neatly off, laid *perfectly flat* at the very bottom of the furrow, and then the rest of the earth so loosened up and shaken over the buried sod, that the bottom of the furrow was 21 inches below the surface of the field when plowed. The next trial was with the largest size "sod and sub-soil," when the furrow was fully 12 inches deep and wide, and the labor of lifting this weight of soil and turning it over in a condition so thoroughly broken up, above the sods laid down beneath, was the most striking point in the day's exhibition

A difficulty in the action of the old Michigan sod and sub-soil, has been that the forward *skim* doubled up the sod instead of turning it flat over, and consequently the work was badly performed. In the present trial it was inverted completely, and when the oxen were started up more briskly, the earth raised over upon the top of it came out in what might almost be called a shower of thoroughly broken fragments, and it was thrown up so loosely that on measuring from a level with the highest lying clods to the bottom of the furrow where the plow was running deepest, the depth taken in this way was found to be 26 inches—in other words, both sizes of the sod and subsoil loosened up the respective quantities of earth through which they passed, so as to make it occupy something more than double its original space.

We did not see the "Stubble" plow tried, but the same mould-board used in the "Sod and Subsoil" is there employed, so that we could easily see how it would operate to invert and pulverize on old upland soil.

THE BOG PLOW.—The next trial was in cutting a bog which had never been plowed before, where the tussocks of grass and roots were exceedingly well matted together, requiring a sharp edge to detach them, and great force in the first furrow to throw them over. The latter was at length accomplished mostly by hand, and then the work proceeded without difficulty, taking out a slice 8 or 10 inches deep and 20 to 24 in width. Upon this plow a circular cutter is attached, and it has a wide steel edged share, and a draft rod so that both oxen may walk upon the sod, as one could not easily have found a footing in the mire at the furrow bottom. When taking out its largest furrow, its action was very fine; it is desirable to have the whole of the grass completely buried in, in order that none may have any chance of growing—an end which was accomplished quite perfectly throughout.

LAP FURROW—The day concluded with the turning of several furrows, lapping one upon another, at an angle of 45°, 7 inches deep and 10 wide, and the work equally well performed with what had preceded it.

Of course there was no room in testing a plow by itself, for dynamometrical comparison as to draft, but I think there was little doubt that an enormous weight of earth was stirred in several instances with perhaps unusual facility. The good plow must combine in its operation something of the two powers of the wedge and the screw, and if careful calculation to reach scientific results in a scientific way, can be effectively applied to determine its form, Mr. Holbrook appears to have made the experiment as earnestly as the protracted study of the subject for eight or ten years will admit.

During this period, there is no doubt that our farmers have, by degrees, been learning to plow better and more judiciously, or that our manufacturers have been improving the character of the implements offered for sale. But it is very singular how little evidence of either of these facts is afforded, either by the files of our agricultural journals or the transactions of our societies. While both have been crowded with the discussion, for example, of the different methods of harvesting by machinery, and competition in that and some other branches of manufacture has left no stone unturned in the rivalry for public approval and patronage, we have seen the makers of the Plow silently resting on their oars, receiving whatever demands might come to them through the ordinary channels of trade, but apparently quite contented that the great body of the farmers of the country, and especially that leading and important class who read and think, should remain, so far as any efforts they make to the contrary are concerned, in almost entire ignorance of whatever improvements may be under way. L. H. T.

[For the Country Gentleman and Cultivator.]

DOMESTICATION OF WILD FOWL.

The Guan.

From Botany and Horticulture we have in recent times derived wholesome and substantial vegetables; plentiful, grateful and luxurious fruits; forms of delicate and fragile beauty, to decorate the mansions of the wealthy patrons of the science; continued additions to our woods and shruberies, our hot-houses, our cottage gardens; nay, by the sanative force of herbs, even disease has been arrested, the irritation of incipient insanity allayed, fever mitigated —in short, life prolonged, and made more comfortable during its prolongation. What, meanwhile, has Ornithology effected to increase our store for the last three hundred years? We do not say, nothing; but we dare not say, much more than nothing.

Ornithology has imparted little practical knowledge respecting those creatures about which the poultry-maid could not already give us information. Even Agriculture, which requires so heavy a ballast of capital to carry her along steadily on her way—even Agriculture has introduced turnips, swedes, mangold-wurtzel, and other crops, within the memory of our fathers and grandfathers; but ornithology does not this day publicly decide, in print at least, whether birds like those now under consideration, promising truly or falsely to be as valuable as turkeys or Guinea-fowls, and which have been captive at least two hundred and fifty years, are or are not easily and profitably propagatable in our farm-yards.

Mr. Swainson, relying mainly on the circumstance that the Curassow and Guans are included in his rasorial types, also expresses a sanguine hope, accompanied by a reproach for past neglect, that an important addition to our poultry stock is about to become firmly established in England. "It is singular," says he, "that so little pains have hitherto been taken to domesticate these American fowls; since by their sociability and gentleness, they evince every disposition to live under the dominion of Man. The flesh we know from experience is particularly delicious."

The Guans range, it is said, with the English pheasant in point of magnitude, though rather exceeding them, and go in pairs. When caught young and tamed, they appear to make themselves even more at home than the common fowls. They live on very friendly terms with other poultry, much more so than Guinea-fowl do, neither fearing their co-mates, nor yet attempting to tyrannize over them.

Who, then, that has a poultry-yard and its usual appurtenances, can help wishing to introduce therein a few of these most promising and inviting creatures, about which so strong a case has been made out?

Less is generally known respecting Guans, (a figure of which adorns the head of this article,) as far as their propagation under human sway is concerned, than about Curassows. Almost every late book, on Ornithology especially, which mentions them, recommends them as a desirable and easily-managed addition to our poultry stock; yet no author has either seen this project carried into practice, or has given, or can give, any directions in detail as to how they are to be successfully managed and reared.

Temminch remarks, "the Guans, with a disposition not less gentle and peaceable than the Curassows, have less frequently been made the subject of experiment. Although their manners are so similar, the Guans have not yet received from man the same regular and continued care, nevertheless, by judicious treatment we might easily succeed in transplanting these useful creatures into Europe; rural conomy would find in this genus of birds, as in the Galeated and Crested Curassow, important resources and new means of prosperity." This proved additional fund of profit seems surely deserving consideration and worthy a trial. Mr. Bennett, relying upon this opinion of Temminch's, and not, the reader is requested to bear in mind, upon any success in acclimating and rearing Guans that he had anywhere attained, writes, "there can be little doubt that with proper care and attention these birds might be added to the stock of our domesticated fowls;" giving as a motive for endeavoring to make the addition, the tempting incentive that "they are spoken of as furnishing an excellent dish for the table."

Thus, then, the matter stands at present, according to, we believe, every yet published authority. Guans and Curassows can be and ought to be reared in every farmer's poultry-yard, we will not say in flocks, but certainly in moderate and tolerable abundance. They are not, however, yet visible either here or abroad. Why not? There is a fault and a difficulty somewhere; either we have been very remiss and indolent in neglecting to make such valuable acquisitions, or nature has been unyielding.

Springside, 1860. C. N. Bement.

Blacksmith's Scales for Peach Trees.

About two years ago I heard a neighbor say that he had found great benefit in using the scale from blacksmith's anvils around his peach trees. I had several that had been badly injured by worms, around which I placed the scale. Since that time I have not been able to find a worm, and the trees have recovered their green healthy appearance.

Newark, N. J. G. H. Bruen.

☞ Warren Leland, Esq., of the Metropolitan Hotel, New-York, owns a place of 200 acres in Westchester county, upon which he keeps sixty cows. For the month of May the Metropolitan Hotel credits W. Leland $472 for cream and milk from his little farm in Westchester county.

PATENT OFFICE REPORT FOR 1859.

Reduction of Appropriation—Foreign Seeds and Cuttings—Distribution of Seeds—Contents of the Volume—Parsons on the Productions of the Ionian Islands and Italy—The Lupin, English and American Experience with it—Other papers and their subjects—The Orange in Florida—Agricultural Inventions.

We have been kindly favored by M. KELLEY, Esq., Chief Clerk in the Department of the Interior, Washington, D. C., with an advance copy of the Patent Office Agricultural Report for 1859, for which Mr. Kelley has our thanks.

In the introductory Report of the Commissioner, dated Jan. 3, 1860, he says:

"Owing to the reduced appropriation made by Congress for agricultural purposes for the fiscal year ending June 30, 1860, the office has been compelled to reduce its expenses and confine its action to a more limited sphere than heretofore. In doing this it was found necessary either to decline purchasing for distribution the usual varieties of garden and field seeds, or to abandon the experiment of propagating the tea and various other foreign plants and grape cuttings, for which orders had been given. The expense which had already been incurred in their procurement would hardly justify the office in throwing them aside. It was accordingly deemed advisable to apply the remainder of the funds solely to the procuring of information and preparing the material for the Agricultural Report, and to the progagation and distribution of such varieties of foreign seeds and cuttings as had been already engaged. These were of such a nature that if they had been distributed throughout the country immediately upon their receipt, the probability is that very few of them would have reached their destination in a fit state for propagation. The tea seeds, more particularly, arrived in such a condition that it was of the utmost importance to plant them at once. For this purpose large propagating houses were erected upon the government grounds north of the canal. These structures now answer well the purpose for which they were intended, as is exhibited by the fact that we have, ready for distribution, over 30,000 well rooted tea plants, 12,000 foreign and domestic grapevines, 900 rooted, seedless, pomegranate cuttings, and various foreign, medicinal and ornamental plants. These will be ready for distribution during the present winter and the ensuing spring."

"The nature of the tea plant is such that it cannot be successfully cultivated in the open air above the northern boundaries of Tennessee and North Carolina. For this reason, the larger portion will be sent south of that line. A sufficient number, however, will be divided among the remaining States, to satisfy the reasonable demands for such persons as have the conveniences necessary for their protection during the winter months."

"Last summer an agent was employed to travel through several of the Northern States for the purpose of collecting the best varieties of ripe native grapes. An experienced chemists was also engaged to analyze the fruit thus collected, for the purpose of ascertaining the amount of saccharine matter and other ingredients contained in the juice of each variety, and determining which kinds are best adapted to the making of wine. The reports of the agent and chemist appear in this volume, and will no doubt prove valuable and interesting to the public."

In speaking of the distribution of seeds, as heretofore, the Commissioner, as we conceive, very sensibly remarks,

"I have no hesitation in saying that the necessity no longer exists of distributing the various seeds of *domestic* growth, inasmuch as the facilities for obtaining them are such that every person of enterprise enough to cultivate them, can obtain everything in that line from the seed-stores."

The first article in the body of the volume, is a report upon the "Government Experimental and Propagating Garden," embracing, among other things, a history of the tea plant, its culture, preparation, &c.; as also, a list of grapevines, (25,000 plants.) These embrace seedlings and rooted cuttings from not less than fifty varieties of native and foreign grapes. The list contains about fifty named sorts. We here, however, only give the name of one variety, viz:

"Lady's Finger—Berries, three inches long, three-fourths of an inch in diameter; delicious flavor—from Egypt."

This is followed by a list of seeds, the result of orders made previous to March 1859—also a list of plants from Palestine, forwarded by the Rev. J. T. Barclay, a christian missionary from the United States to Jerusalem. Some of these may prove valuable acquisitions to the agricultural interests of our country, where the climate will admit of their culture. Among those forwarded were seeds of the Carob tree, or Carob beans. "It is generally considered the locust tree of the Scriptures, and its fruit has been called St. John's bread, while the shells of the pods are supposed to be the husks of which the prodigal son desired to partake with the swine." The pods in Egypt are so thick, and so charged with sugar, as to be regarded as a delicacy by the common people.

The next paper is an "Historical Sketch of the United States Agricultural Society,"—followed by a paper on the "Native Grapes of Arkansas and Texas," by H. C. Williams of Texas, which is succeeded by Dr. C. T. Jackson's report on the saccharine contents of native American grapes in relation to wine-making; as also a report by Dr. J. on the proportions of acids in native American grape wines made from the pure juice of the grapes. The next thirty pages are occupied by reports from John F. Weber of Washington, D. C., on American grapes—culture, wine-making, &c. There are also several other papers on the grape, wine-making, &c., which will doubtless be found very useful, as grape-growing and the manufacture of American wine, are exciting a great deal of interest in almost every section of our country. With our diversified climate and soils, and great variety of native grapes, we think the day is not far distant, when the products of the vine will become an important item in our statistical reports.

S. B. Parsons gives us some thirty-six pages of interesting matter "On the Productions of the Ionian Islands and Italy." If our limits would permit, we should be pleased to make copious extracts for the benefit of our readers. We can only make a few quotations, appending a few remarks. He says, at Agrami,

"In laying down a new vineyard, the land, which should slope southerly, is first well cross-plowed in the month of November, and allowed to rest till the middle of January. Trenches are then dug, about *five feet deep*, and from four to five feet apart, which are left open to ventilate about fifteen days. The plants, which are vigorous cuttings of the former year's growth, and generally from eight to ten feet long, are placed upright in the trenches, at a distance of five feet apart, the trench being then filled in to the depth of three feet. The upper end of the cutting is then (ox-bow like) turned down with its point stuck in the ground, to keep it fresh. As the season advances and the plant begins to vegetate, the trench is from time to time filled in."

Experience undoubtedly has taught these cultivators of the vine the necessity and economy of this deep trenching. But care in preparing the ground, and setting of the vine and fruit trees, we suppose is as necessary in this country as there; if so, many of our people are sadly deficient in this matter. We have seen many apple and other trees transplanted into excavated holes, the size and depth of a half-bushel measure, the owners thereof feeling quite complacent with the idea that they had discharged their duty in this business of fruit growing.

Mr. P. two or three times speaks of lupins—cultivated for cattle forage and for green manuring. Speaking of manures in Sicily, he says:

"The usual fertilizing materials are stable manure, and where it is to be had, that of goats and sheep. Bones, formerly used for manure, but now employed in chemistry, have become too expensive for the farmer, and are therefore left to be exported, in large quantities, to France and Genoa. Lupins, as before observed, are in frequent use for manure;

their thick succulent tops covered by the plow, form a highly fertilizing mass of vegetable matter."

We refer here to the lupin, believing it might be profitably cultivated for green manuring in many sections of this country, more especially upon light sandy soils. The lupin was used as food by the ancient Romans, and, as with the people of the present day, was plowed into the soil as a manure. Recently, in Germany, it has been found to be one of those plants by which unfruitful sandy soils may be brought most speedily into a productive state. The superiority of this plant for the purpose of enriching the soil depends upon its deep roots, which descend more than two feet beneath the surface; upon its being little injured by the drouth, and not liable to be attacked by insects; upon its rapid growth, and its large produce in leaves and stems.

In confirmation of the above, we quote from a letter published in the *Mark Lane Express* of April 25, 1859. The letter was written by Mr. Hartly, an English farmer, who was then making an agricultural tour in Germany. Mr. Hartley says:

"In continuation of an account of those Flemish crops, I will commence this letter with the 'yellow lupin.' Wherever I have been in France or Belgium, I find a greater admixture of sand in the soils than in England. For some few years past on these soils, the agriculturists, or rather proprietors of these miserable lands, have been much impressed with the immense advantages to be derived from the yellow lupin, as a green crop to be plowed in. It is so effective that where it has been fallowed up, as in Pomerania, Saxony and Bradenburg, those estates, which before were worthless, now produce splendid crops of rye and lupins, without any manure being employed but that which arises from these plants.

It is not a high growing plant, but very leafy and branches much; consequently it may be drilled thinly at eighteen inches, and hoed or not, as you please. It is a sort of bean, sown in the spring at the rate of two bushels per acre, and plowed in when in full flower. The ground may then be sown again with it, and that crop also plowed in. It likes *deep cultivation*. The land is never sick of it, and when grown annually as manure, for six or seven years, it has turned the soil of a dark color, from the quantity of decayed matter deposited."

Mr. H. further says:

"We have many sandy districts in Norfolk, Surry, and other parts, where I cannot see why it should not have the same effect as abroad in the north of Germany. There are many gentlemen there who grow from 120 to 200 acres of this plant annually, as the farms run large. They grow it for its seeds, and also occasionally cut it for fodder. The grain or seeds ripen in August. The feeding property of the grain is about the same as common beans. If mown for fodder in full bloom, it is considered quite as nutritive as clover, but I should doubt that. It has grown two tons per acre after having been cured. It is good for all animals, but cows must not be allowed too much of it, or it will give a taste to the milk. On soils that suit it, (and any will do except chalk,) it will grow a yard high, deeply plowed and subsoiled."

We experimented with a quart or so of the seeds of the white lupin last year. There is no essential difference between the yellow lupin and the white—seed sown broadcast on very poor sandy, irony soil, grew plants from 12 to 18 inches high. Those sown on a loamy, dark-colored soil, grew plants from 18 to 24 inches high. Others, drilled in on a good sandy soil, grew from 2½ to over 3 feet high, producing a good yield of seed. Sown in the spring as early as the season will admit of, without injury from frosts, and the plants will blossom in about three months, soon after which they may be turned into the soil, and perhaps another fair crop could be grown on the same ground before the autumnal frosts; if not, English turnips could succeed them. Clover is much used in many sections of our country for green manuring, and usually succeeds best on lime or marl soils, but poorly on feruginous (irony) soils—while the lupin does not do well on limy soils, but prefers a feruginous (irony) one. We think the lupin a plant well worthy cultivation, and hope many of our farmers will experiment with it and favor the public with the results, through the agricultural journals.

Forty-one pages are devoted to fertilizers by Hon. Thos. G. Clemson, L. L. D., which, from a rather hasty perusal, we judge to be a valuable treatise upon the important subject of fertilizers. This is followed by an article on "Veterinary Science and Art," and one on "Veternary Medicine," by Dr. Craig, of Washington. "The Acclimation and Domestication of Animals," by the same writer. Some 20 pages are devoted to J. M. Comstock's essay on "Fish Breeding." The breeding of fish is attracting some attention in various quarters, and may yet prove a profitable pursuit. Mr. C.'s paper will be eagerly read by all those having a desire to engage in rearing fish. About the same number of pages in the Report are filled with Henry F. French's paper on "English Plows and Plowing." Whatever Jugde F. writes is worth reading. But we cannot here go into a review or analysis of his article—it should be read in full. Arrangement of Horse Stables, by Dr. Rueff, Germany, and a paper on Saxon Merino Sheep, by Von Sternburg of Germany, are undoubtedly valuable contributions, but we have not had time to give them an attentive perusal. Sixty-two pages "On the Plants used as food by Man in Different Parts of the World, and at Various Periods," by Dr. F. Unger of Germany—translated from the German for this Report, containing a great fund of useful information about what people eat in different parts of the world.

☞ The Board of Managers of the State Agricultural Society of California, have fixed upon Wednesday evening, September 19th, for the State Fair, when the opening address will be delivered. The Fair will close Sept. 26th.

There are many other papers, "shorter or longer," but we cannot here go into particulars, but will name some of them. "Some Hints upon Farm Houses," by Samuel D. Backus, Architect, New-York, a useful and valuable paper, and should be carefully perused by all farmers who intend building dwelling houses. Meterology, by Prof. Henry, a valuable scientific contribution, which is followed by a dozen or more reports on Tobacco, mostly from consuls in foreign countries. There is one short paper on "Wooden Shoes." Should the cattle plague prevail in this country to the extent it has in some others, our people may yet be obliged to wear wooden shoes—if so, this will become a valuable paper for future reference.

Many of our readers are aware of the great injury the Orange trees of Florida have sustained by the depredations of the mussel-shell shaped scale insect that infest the body, limbs and leaves of the Orange tree, in countless numbers. To destroy the insects, various experiments have been resorted to by means of liquid applications, such as soda, sulphur, coal tar, aloes, spirits, syrup, lime; and, in fact, every imaginable thing, almost, was tried—holes were bored in the bodies of the trees, and filled with sulphur, calomel, &c., without producing any favorable result. Many of these experiments were tried by Mr. Glover, late Entomologist of the Ag. Division of the Patent Office. After many experiments it was discovered that Peruvian guano mixed with soap suds, and applied with a syringe, possessed superior efficacy over all other applications.

At page 554 of this Report, is a copy of a letter from Dr. Morague of Florida, giving the result of the "suds and

guano" application to his orange trees. It had the desired effect. The Doctor says, "syringed my trees once a week for a month or two, and, am happy to say, with complete success. Although my grove was literally covered with the coccus, not one can now be found alive." Recipe—"to a barrel of soap suds add a common bucket of guano."

To the above we add the testimony of William A. Forword of Florida, who says:

"I feel it due to Mr. Townend Glover that I should bear testimony to his usefulness in the duties assigned him at this place.

"He experimented on my orange grove, and I consider he has saved it. His syringing of the trees regenerated them, and destroyed the insect. I have no doubt his remedy is a thorough one. It has certainly proved so in my grove, and others in this town, wherever practiced. I feel now that we have nothing to fear from the orange insect."

We do not see why the same remedy will not answer in destroying the mussel-shell shaped scale insect upon the apple and other trees, if applied during the early part of June, while the newly hatched insects are come-at-able. Perhaps, too, the same would destroy the rose slug, and those infesting the pear and cherry trees, and, perhaps, the curculio, and the green lice aphides that sometimes appear in such vast numbers on the tender twigs of the apple tree, rose bush, &c. Possibly a bucket of clear hen manure might be used as a substitute for the guano—the thing is worth trying.

The last eighteen pages of the Report are taken up in giving a list of Agricultural inventions or discoveries, patented for the year 1859, and we here give a summary of a small portion of them, viz: 13 bee hives, 49 cultivators, 37 churns, 19 grain separators, 17 harrows, 13 of which are rotary, 98 harvesters and harvesting machines, 72 corn seed and cotton seed planters, besides a large number of seeding machines and drills, thrashing machines, and other agricultural implements "too numerous to mention."

OATS—CHANGE OF SEED.

The Canadian Agriculturist copies the article on this subject, given on p. 283 of this paper, and adds:

Our experience very much accords with that of the correspondent of the COUNTRY GENTLEMAN, as stated above. A few years since, the Board of Agriculture of Upper Canada, imported from Aberdeen, in Scotland, several varieties of oats that are much esteemed in the British Islands. The seed of all the sorts was plump and heavy, weighing from 43 to 48 lbs. a bushel. They consisted of the Potato, Hopetoun, Angus, Berlin, Poland, and the Black and White Tartarian. The seed was sown by different persons on various soils, and the result was a gradual deterioration in quality year by year. These oats, however, were generally heavier than the ordinary varieties cultivated in this country, for three or four years, when they seem to have reached their minimum of weight. The mode of preparing the land, and the character of the season, of course affect considerably the quantity and quality of the grain. In Upper Canada our summers are generally too hot and dry for the oat. In the lower section of the Province this crop appears to do better; and in Nova Scotia and Prince Edward Island, owing to the greater moisture of their climate, arising from their contiguity to the ocean, oats yield a heavy grain in large quantities. For ordinary purposes we think that the Tartarian, White or Black, is the best suited to this section of the Province. It is hardy, and will more than make up in quantity what it may be deficient of in weight by the bushel. Seed oats ought to be frequently changed; getting them from different climates and soils as far away as possible. Like pigs, oats rapidly degenerate by sowing the same kind on the same farm for a number of years. The only remedy lies in frequently changing the seed.

ORIGIN OF VARIOUS PLANTS.

The annual meeting of the Paris Society of Acclimatation, according to the *Revue Horticole*, the present year manifests a flourishing condition in that popular and useful body. M. St. Hilaire, the President, delivered an interesting discourse, and the Vice President, M. de l'Huys, read a paper upon the most celebrated gardens of antiquity, in which he glanced at the origin of the various new plants derived from the East, and, later, from the New World. We translate from this part of his interesting memoir the following facts:

CEREALS.—Wheat and buckwheat came from Asia—rye from Siberia—rice from Ethiopia.

VEGETABLES.—The cucumber from Spain—the artichoke for Sicily and Andalusia—the chervil from Italy—cress from Crete—lettuce from Coos—the white cabbage from the North—the red and green cabbage, the onion and parsley from Egypt—the cauliflower from Cyprus—spinach from Asia Minor—asparagus from Asia—the pumpkin from Astracan—the eschalot from Ascalon—the bean from India—the radish from China—the melon from the East and from Africa—the potato and the Jerusalem artichoke from America.

FRUITS, &c.—Asia sent forth the filbert, the pomegranate, the walnut, the quince, and the grape—Armenia the apricot, Media the citron, Persia the peach, India the orange, Mesopotamia the fig, Pontus the cherry and the hazelnut, Lydia the chestnut, Syria the plum, Mauritania the almond, and Greece the olive.

Among plants of different uses may be mentioned the Coffee originally from Arabia, Tea from China, the cacao (cocoa) from Mexico, tobacco also from the New World, anise from Egypt, fennel from the Canaries, the clove from the Moluccas, the castor oil bean from India, &c.

TREES.—The horse-chestnut came from India, the laurel from Crete, the elder from Persia, &c.

FLOWERS.—The narcissus and carnation came from Italy, the lily from Syria, the tulip from Cappadocia, the jasmine from India, the starwort from China, the nasturtium from Peru, the dahlia from Mexico, &c.

Is it not time to ask—queries M. Barral after the above quotation—if any kind of vegetation at all naturally belongs to the Gauls? He claims, at least, the oak tree, but adds that the success of past "acclimatations" should encourage every nation to try new ones.

GRUBS AND CUT-WORMS.

EDS. CO. GENT.—Your correspondent G. W. H., desires to know how he can extirpate those little pests without destroying his corn. With entire deference for your reply, permit me to say: Had he have asked the question at an earlier date, I feel confident I could have informed him. But my method I fear may reach him too late for his present crop, as it will not do to apply it after the corn is in leaf.

About ten years since I learned from an *old brick-maker*, that they always prepared a bed of clay in the autumn season for the following spring work, by digging it up and strewing it with salt, which he said destroyed the worms, otherwise the bricks would be filled with wormholes and useless. This confab took place just at corn-planting season, and I at once resolved to try an experiment.

Immediately after I finished planting my corn, I had about a table-spoonful of salt spread over each hill. I have continued to have this done every corn-planting since; and up to this date, I have never had a day's labor performed in replanting corn from the depredation of worms of any kind; and those of my neighbors who have tried the experiment, fully agree with me in believing that it is a sure preventive to injury therefrom. Let your agricultural friends try it, and if it fails to have the desired effect, it is what it has never done with C. HARVEY.

☞ Mr. W. C. HARBISON of Pennsylvania, who has been extensively engaged in the management of bees in California and elsewhere, has prepared a volume of 287 pp., entitled "Bees and Bee-Keeping; a plain, practical work, with directions how to make bee-keeping a desirable and lucrative business, and for shipping bees to California." Our copy came from the author, but has the imprint of Saxton, Barker & Co., as publishers.

MANURIAL RESOURCES OF THE FARM.

It is an old maxim of husbandry, that "a good farm, like a good joint of meat, only requires basting with its own dripping," or in other words, that it will furnish of itself sufficient fertilizing material to keep up its maximum productiveness. As a general rule, we may rely upon this statement, and we propose here to offer a few hints on some of the manurial resources of the farm.

The first grand resource of the farmer will be found in the plowing under of greensward—the thicker and heavier, the more effective—to enrich the soil for other crops. Without grass *as a manure*, we should find it much more difficult to keep up the fertility of our farms. No other crop is so constant *in* growth—early and late, and under all kinds of treatment,—as that of the different grasses. No other returns so great a burden of vegetable growth to the soil, and at the same time furnishes so valuable a supply of food for stock, in both summer and winter forage, as this much neglected, yet everywhere present, product of the soil.

The growing of clover and the grasses lies at the very foundation of profitable farming, as may be seen from several points of view. And first, as above hinted, plowing under a thick heavy grass sward furnishes an ample manuring for several successive grain crops. The decomposition of the abundant roots and stems of the grass supples nutrition for growths of a different character, and having a greater money value to the farmer. Hence it may be good policy for the farmer to give a large share of his labor and attention to producing a heavy growth of grass on all lands when devoted to this crop, knowing that this most cheaply and effectively prepares his soil for the production of other crops.

In another point, we see that grass-growing tends to improvement, when it is produced for the consumption of animals upon the farm. We can have no better resource for manure than in the practice of stock-feeding, and especially is this true of sheep and fattening stock, and in a less degree of all the animals of the farm. Indeed, it has become an axiom of husbandry that stock-keeping must have a place in the management of every farm to render it profitable for a course of years.

A *second* grand resource of the farmer for manure—for keeping up and increasing the fertility of his farm—is not only to pasture and fodder stock, but to fatten them by the aid of the grain products of the farm. This course will not only largely increase the amount of manure, but will give it, under proper management, a much greater effective value as a fertilizer. It was a maxim of an excellent farmer, Mr. Coke, late Earl of Leicester, "that the value of farm-yard manure is in proportion to what it is made of. If cattle eat straw alone, the dung is straw alone; the cattle are straw, the farm is straw, and the farmer is straw—they are all straw together." And to come to an authority at home, John Johnston has advocated this course as the most effective and profitable for improving the value of our farms. "High feeding," says he, "would make higher manuring, by both making a larger quantity and a much better quality."

A *third* grand resource may be found in the inexhaustible muck beds so abundant in most sections of the country. These contain vast supplies of "highly concentrated vegetable food, not only partly cooked but seasoned," to quote Dana's "Muck Manual." It has been found by many entensive and repeated experiments, that (in the words of Prof. Johnston,) "it is only necessary to mix half-dried peat with any substance which undergoes rapid spontaneous decomposition, when it will more or less speedily become infected with the same tendency to decay, and will thus be rendered capable of ministering to the growth of cultivated plants." We have in former volumes given considerable attention to this subject, but its importance will allow of its frequent recall upon the attention of our readers.

The fertilizing matters allowed to run to waste upon most farms, might supply another valuable resource for improving their productiveness. The liquid manure of stock, the slops of the kitchen and wash-room, the contents of privies, refuse bones, and waste animal matter—these, and many other things cumbering our back-yards and befouling our cellars and store-rooms, would form a compost heap of great richness and no inconsiderable value. But we must leave the subject with our interested readers, hoping each will look about him, and see what are, and how he can best apply the manurial resources of his farm.

SYMPTOMS OF PLEURO-PNEUMONIA.

In our last number, p. 364, we gave an account of the appearance of this disease in New-Jersey. In the Newark Daily Advertiser, Dr. I. M. Ward, who was present at the examination to which the statement we published referred, gives the result of his observations as follows:

"In all cases examined the ravages were confined to the respiratory organs; in some cases the right and in others the left lung, had been the seat of the disease, and in every one involving the whole mass of lung with its covering, and extending from it to the lining membrane of the ribs. Hence its name *Pleuro-Pneumonia*. The appearance of the bronchial tubes gave evidence of participation in the disease from extension to them, from the substance of the lung; disorganization of structure being found alone in the lungs and its coverings.

Symptoms.—The incipient symptoms are *loss* of appetite, hanging of the head, and as the disease progresses an extension of the head—bright and watery eye, breath hot, breathing quick, with more or less agitation of the flanks, with an occasional cough, always dry; more or less thirst; horns and ears hot. The quick and occasional cough, coupled with great prostration of strength, more particularly mark the progress of the disease.

The ear applied to the side of the animal readily detects the impediment to a free circulation of air through the lungs, from the violent congestion that exists. So unequivocally declared was the existence of the disease by auscultation in one of the sick animals, that we venture to declare not only the existence of its fatal advance, but the portion and side of the lung to which it was confined. This animal being selected for experimental observations, the post mortem examination proved the correctness of the diagnosis.

The symptoms above detailed, and the examinations after death, proclaimed it an inflammation of the lungs, associated with a low grade of fever, depressing so remarkably the vital energies as to characterise the disease *one of exhaustion*. It having been long observed that fever in cattle would assume a typhoid form, we venture the opinion that it is analogous to the *Typhoid Pneumonia*, which occasionally prevails epidemically in some sections of our extended country, in the human race, as a desolating scourge. What of the disease we have witnessed with us is unquestionably communicated from animal to animal; call it contagious if you can do so without raising a controversy about the word contagion, but not epidemic. If this is so, let the sick animal be at once separated from the herd, and all comunication with other cattle be at an end.

Lois Weedon System of Wheat Culture.

The May no. of the London *Farmers's Magazine* has an article on the "Principles of Manuring," introductory to which the writer gives the following concise view of the system of growing wheat *without manure*, practiced for years by Mr. Smith at Lois Weedon:

As a means of illustrating both the principles and practical bearings of this celecrated controversy, it is impossible to select a more apposite, instructive, or important instance than that presented by the well-known agricultural triumph in successive and un-manured wheat-growing achieved by the Rev. Samuel Smith, at Lois Weedon. The manner of his yearly cultivation is as follows: At the usual time in autumn, the seed is drilled in strips, which (consisting, as each set does, of three rows ten inches apart) occupy thirty inches in width, and between strip and strip there is left an unseeded space of similar dimensions. During the growth of the plants in the ensuing season, the rows receive sedulous attention in hand-hoeing; while, at the same time, the interspace between strip and strip undergoes a constant succession of horse-hoeing and other fallow operations. Next year these fallowed spaces bear the strips, and the stubble of the preceding year's crop is plowed up and summer-fallowed in like manner. In one point of view, there is a perfect analogy between this expedient and a practice not uncommon on the heavy land of Essex, in which is pursued field by field the simple alternation of corn one year and bare fallow the next, to be again succeeded by corn, and so on for ever; but in various circumstances of detail, into which we shall not here enter, the Lois Weedon method possesses a superiority very favorable to both healthy and prolific cereal productiveness. Mr. Smith's experience in this mode of management dates back to the year 1846. The area of his operations is comparatively small, being only five acres. The soil is above average quality, and consists of a staple of good wheat land, resting on wholesome clay, and naturally dry. The implement used for inverting the soil is the spade, or fork, in place of the plow. The average yearly produce for twelve years, ending with crop 1859, has been upwards of thirty-six bushels per acre of prime marketable wheat; and the expenses of tillage, rent, &c., are as follows:

	£	s.	d.
Digging and cleaning,	1	14	0
Horse-hoeing, three times,	0	6	0
Plowing,	0	4	0
Hoeing and hand-weeding,	0	5	0
Three rollings with crushers at seed-time and at spring,	0	3	0
Two pecks of seed,	0	2	6
Dibbling,	0	5	0
Bird-keeping,	0	4	0
Earthing-up wheat,	0	3	0
Reaping, &c., thrashing, and marketing,	1	13	0
Rent £2, rates and taxes 4s. 3d.,	2	4	3
Total yearly expenses,	£7	3	9
Value of thirty-six bushels of wheat at an average price of 6s. 6d. per bushel,	£11	14	0
Deduct expenses as above,	7	3	9
Annual profit per acre besides the value of the straw,	£4	10	3

One other element of Mr. Smith's practice still remains to be stated, (and on account of its paramount importance it has been reserved for special notice,) namely this, that in each summer fallowing of the interspaces a method of deep cultivation is pursued, by which the upper and under strata of the staple are stirred, and inverted to the depth of ten or eleven inches; and if it be asked upon what grounds was this trenchant and very thorough tillage resorted to, the reply is, because theory and practice alike assured the experimentalist—1st, that usually in the soil, and ever in the air, there is abundance of nutriment for cereal crops, in proportion as the mineral and atmospheric elements are brought into mutual reaction within the pores of the soil, by perfect cultivation; and hence, 2dly, that by means of perfect tillage, the aid of adventitious fertilizing substances is not indispensable to the profitable growth of corn.

In point of agricultural importance, no industrial circumstance belonging to the present century is more entitled to deep consideration, than this brilliant, yet sound instance of tentative husbandry; nevertheless, in order to appreciate its true practical value, it is necessary to bear in mind, that as respects the happy combination of operative details of which it is made up, it consists of no principle or expedient in cultivation which had not been known and practiced before. As an example of cereal productiveness, procured without the intervention of cattle crops, what other unalternate system than this prevailed in England, when, prior to the introduction of roots and clover in rotation, she not only fed her own population with corn, but exported it largely to foreign parts? Nay, more—what other than this, is the still existing policy in the cereal countries of continental Europe, which now so largely provide England with breadstuffs. As for the *interculture* of the Lois Weedon method, admirable and efficient as the expedient is, it can be regarded simply as an adaptation to corn tillage of that method of drill husbandry hitherto confined in general practice to the fallow crops only; while finally, the deep working, if not so generally prevalent as it ought to be, has long existed in many of the best-farmed districts of the island.

Now, the moral we wish to point out, in the foregoing statement, is this—that, from the case where, under sunny skies, and on a rich soil, the lazy husbandman has only to scratch a little covering of earth over his corn seed to produce an abundant crop, up to the elaborate processes of Lois Weedon experience, there is every variety and degree of evidence to show that wheat or any other kind of grain can profitably be raised by the power of tillage alone, and that the use of manures, whether obtained from the cattle crops of modern rotation husbandry, or from external resources, is not indispensably necessary to profitable cereal husbandry. Nay, more—from the practice of all nations it is deducible, that in proportion (within certain bounds) to the greater depth to which a soil is stirred, and to the perfect annual tillage it receives, the produce of that soil will be more abundant.

CHEDDAR CHEESE.

Morton's "Hand Book of Dairy Husbandry," gives the following account of the manner in which this celebrated cheese is made:

"Cheddar Cheese-making differs from that already described, chiefly in the scalding of the curd; which is done by heating a portion of the whey, and letting the curd remain in it for a considerable time, at a temperature even above the natural heat of the milk. The following description of the dairy management of Mr. Harding, at Compton Dando, Somersetshire, is given by the deputation from the Ayrshire Agricultural Society, who visited the farm in 1854. The milk is poured from the pails through a sieve into a receiver outside, from which a pipe conveys it through the wall to the cheese-tub or to the coolers. A canvas bag is also placed over the inside end of the pipe, so that a double precaution is used against impurities entering with the milk.

"The rennet is prepared much in the way that it is done in many Ayrshire dairies. Mrs. Harding steeps five vells at once, and this usually suffices for two weeks, in which time about 21 cwt. of cheese may be made. The vells appear to have been carefully cleaned and preserved.

"Immediately after the morning milking, the evening and morning milk are put together into the tub. The temperature of the whole is brought to 80 degrees by heating a small quantity of the evening milk. In spring and towards winter a small quantity of annatto is used to improve the color of the cheese. It is put into the milk along with the rennet at seven o'clock. After the rennet is added, an hour is requisite for coagulation. At eight o'clock the curd is partially broken and allowed to subside a few minutes, in order that a small quantity of whey may be drawn off to be heated. This whey is put into a tin vessel and placed in a boiler in an adjoining apartment, to be heated in hot water. The curd is then most carefully and minutely broken, and then as much of the heated whey is mixed with it as suffices to raise it to 80 degrees—the temperature at which the rennet is added. Nothing more is done to it for another hour.

"A little after nine o'clock a few pailfuls of whey are drawn off and heated to a higher temperature than at eight o'clock. The curd is then broken as minutely as before, and after this is carefully done, an assistant pours several pailfuls of the heated whey into the mass. During the pouring in of the whey the stirring with the breakers is actively continued in order to mix the whole regularly, and not to allow any portion of the curd to become overheated. The temperature at this time is raised to 100 deg., as ascertained by the thermometer, and the stirring is continued a considerable time, until the minutely broken pieces of curd acquire a certain degree of consistency. The curd is then left half an hour to subside.

"At the expiry of the half hour the curd has settled to the bottom of the tub. Drawing off the whey is the next operation. The greater proportion is lifted in a large tin bowl, and poured through a hair sieve into the adjoining coolers. As it runs into the leads it appears to be very pure. When the whey above the mass of curd is thus removed, a spigot is turned at the bottom of the tub, and the remainder

is allowed to drain off, which it does very rapidly without any pressure being required. To facilitate this part of the work the tub is made with a convex bottom, and the curd is cut from the sides of the tub and placed on the elevated center. It is carefully heaped up, and then left for an hour with no other pressure than its own weight. After this interval it is cut across in large slices, turned over once on the center of the tub, and left in a heap as before for half an hour. The whey drips away towards the side of the tub, and runs off at the spigot; and no pressure being applied, it continues to come away comparatively pure. After undergoing these easy manipulations, and lying untouched during the intervals that have been mentioned, the curd is ripe for the application of pressure. But great care is taken not to put it into the vat to be pressed at too high a temperature. If the heat be above 60 deg., and it usually is higher at this time, the curd is broken a little by the hand and thrown upon a lead cooler, until it is brought down to the desired temperature.

"The after-management of the cheese resembles that of Cheshire. A little salt, 1¼ lbs. per cwt., or thereabouts, is added to the crumbled curd, and it is mingled and broken by the curd mill. The cheese vats are placed under the machine, and are piled one above the other as the curd falls down. A cloth is put over each vat when the breaking is over, the curd is reversed in the cloth, put back into the vat, covered up, and placed in the press for about three-quarters of an hour. After this, the cheese is taken out, and a cloth wrung out of warm water is put on it. It is again changed at two and at six o'clock, after which dry cloths are put on it. Care is taken that the cheese fills the vat properly. To accomplish this, the vats, at making up, are filled rather full, and the edges of the cheese are pared in the afternoon. Next morning the cheese is rubbed on both sides with salt, and the same cloth is put on again. On the third morning it is treated in a similar manner. The cheese is put into the vat without a cloth on the fourth morning, and a little salt is rubbed over it to keep it from adhering to the wood. After the fourth morning it is reversed in the vat, without a cloth, each morning until the process is complete, about the sixth or seventh morning.

"We may mention here that Messrs. Cokey of Frome, make an apparatus by which a jacketed cheese tub of tin may be surrounded by a stream of hot water, and so the milk and whey retained at any temperature that is required, without the necessity of removing large quantities of milk or whey to a boiler every time of cheese-making for the purpose of being heated."

THE PLEURO IN NEW-JERSEY.

Mr. D. B. LOGAN writes to the Tribune as follows, under date of Morristown, N. J., May 31:—

I was present to-day at an examination of two animals that died of pleuro-pneumonia.

The disease is at Chatham, about eight miles from this place, and at Newark, on the farm of Abram Johnson.

The history of the disease at these pleces, as near as we can learn, is this. During the summer of 1858, Mr. H. L. Jacobus bought some twenty young cattle in New-York, which he brought home, and turned into pasture, some three miles from Chatham. It was about three weeks after when Mr. J. again saw them, when, to his surprise, he found two dead, and two or three others sick. They were at once placed in separate pasture, and none of these have since had the disease. During the same fall, Dr. Munn of Chatham, bought three heifers from this lot of healthy cattle, yarding them with his other stock. Soon after which the disease made its appearance among some of his older animals—four dying very soon after, and others taking the disease, but recovering.

From Dr. Munn's yard it was communicated to that of Mr. Lum, by driving a cow there, where she remained but a short time. Mr. Lum has since lost six cattle; four others which had the disease, he thinks have recovered, and one is now suffering from it, but with a prospect of recovery.

From these yards it spread to six others—each of them losing from one to five animals—making twenty-four deaths in all in this place. There are now but two cases in the place; and it is hoped that, with proper care, it may be confined to them.

The cases at Newark are also traced directly to cattle brought from New-York. Mr. Abm. Johnson, a farmer and dairyman, living about one mile from Newark, on the road leading to Elizabeth, bought in Browning's yards in New-York, about the 20th of December last, six spring calves, and took them to his farm, where he then had some sixty head.

About six weeks after receiving these calves, one of them was taken sick, refused its feed, and showed all the symptoms of the disease as it exists in Massachusetts. After lingering about two weeks, it died. Two weeks after, a cow was taken in the same way; she also lived for about two weeks. About three weeks after, three others took it, and new cases have been frequent up to this time. Mr. Johnson has lost four animals, has had five cases which he thinks have entirely recovered, has now five sick, and one was killed to-day for examination, making fifteen cases in all on his place. Early in May of this year Mr. Johnson sent forty-two head of his cattle, including the five remaining calves from Browning's yard, to Newfoundland, Morris Co., to pasture for the summer. At that place there were large tracts of uninclosed lands, on which large numbers of cattle were pastured during the summer, and these cattle, it is feared, may, by coming in contact with hundreds of others, spread the disease over a wide extent of country. Mr. Johnson, at the time of sending these cattle to pasture, was not aware of the nature of the disease, and has not since heard from them.

I was present to-day at an examination of two animals on his place—one a bull that died yesterday, the other a cow killed to-day, for the purpose of examination. The autopsy was conducted by Dr. C. C. Gryce, V. S., of New-York, in presence of Drs. George A Quimby and Woodruff of Morristown, and Drs. Ward and Peck of Newark. Gov. Olden of our State, Mr. Halstead, President of the State Agricultural Society, A. M. Tredwell, Esq., of Madison, Benjamin Haines, Esq., of Elizabeth, and some twenty other gentleman, principally interested in stock raising, were also present. The bull that died yesterday was the first animal examined, and after him a cow that had been sick one week. Both cases presented every indication of the disease existing in Massachusetts, and were pronounced by Dr. Gryce, as well as the medical gentlemen present, unmistakable cases of pleuro-pneumonia. The cases examined at Chatham presented the same convincing proof, and we are too well satisfied that we have the dreadful plague already in our midst.

[For the Country Gentleman and Cultivator.]

PROTECTION FROM RED ANTS.

MESSRS. EDITORS—"A Distressed Housekeeper," in Co. GENT. of May 10th, inquires for a mode of exterminating red ants. I have found the following remedies very efficacious: Either throw some twigs of tomato vines around your closets, or obtain a small quantity of corrosive sublimate, which dissolve in alcohol, and apply with a feather in the crevices and corners of the shelves. The former remedy is simple and free from danger, particularly where there are children. If the latter be tried, pray caution them to label the bottle "*poison.*" The suggestion may appear unnecessary, but a case in point occurred a day or so ago with one of our neighbors of carelessness with strychnine. A LADY READER.

Meadow Bluff, Va.

MESSRS. EDITORS—If "A Distressed Housekeeper" will put black walnut shelves into the closet in which she keeps her sugar, cake, &c., she will have rest. Some ten years ago I went to my closet to get a sponge cake, and found it covered with those little pests, the red ant. Not knowing what to do with it, I laid it down on an old black walnut table close by, and in less time than it has taken me to write this, the ants left the cake and table. I immediately took the hint, and put walnut shelves into my closets, since which time there has not been an insect seen. T. R. P. *Easton, Pa.*

[For the Country Gentleman and Cultivator.]

LAYING TILE.

Last fall I laid over four hundred rods of tile. I used a ditching plow. The cost per rod for opening the ditch, averaging 2½ feet in depth, did not exceed nine cents, including the cost of the plow. A portion of the subsoil was a stiff clay—the rest a kind of hard-pan, which would require to be picked if dug by hand.

The best way I could find to lay the tile—in fact the only way when the ditcher is used, was to dig and lay and fill in the main drains first, for reasons that are self-evident at the very outset to one using this implement. To fill the ditches I used one horse before a common plow set for three horse plowing, going six times around the ditch when on sod ground, and three when on stubble.

Tanglewood, N. Y E. J. P.

Notes from the Connecticut Valley.

Franklin County, Massachusetts, has a population of 32,000, and the number of its Farms is stated at 2,500. The region along the Connecticut—together with the townships of Northfield and Sunderland on the east side—includes the best farming districts it contains, and the naturally irrigated Deerfield meadows are often referred to when the subject of "inexhaustible soils" comes up for discussion.

It is to the part of the county that lies more immediately in the vicinity of Greenfield, that the following remarks will especially apply. In the last number of this paper we acknowledged in advance our indebtedness to J. S. Grennell, Esq., with whom we had then just had the pleasure of passing two or three days, for the opportunity of driving about among the farms in that neighborhood, and for much of the information which it is the object of these notes to place before the readers of the Co. Gent. We can only venture, however, upon a very general outline in connection with some of the chief points of interest involved, prefacing the attempt by remarking that we shall be glad to have our correspondents take up any part of the picture thus imperfectly sketched, either to supply missing details, or to correct what may be inapplicable in any particular locality.

Greenfield, then, to start with the capital of the county, is a village of about 2,500 people, beautifully shaded, like so many others of the early settled localities in this part of New-England, by fine trees that have grown old in the public service. It is the center of considerable business—one or more cutlery establishments, for example, employing numerous hands, while some of the best cassimeres and doeskins of American make, come from the Greenfield Manufacturing Company's extensive Mills. The manufacture of infant's carriages has become also quite an important item; turned out at a cost varying with their style, of from $8 to $25 a piece, they bring considerable money into the place, from which they find sales all over the country.

Agriculture here depends mostly for its pecuniary returns upon the dairy and the meat it produces. Greenfield sends more stock to Brighton than any other one station in the State. Almost every farmer markets more or less butter. All the farm work is done by oxen. Hence the cattle constitute a leading feature, and as such we shall refer first to

The Live Stock of Franklin County.

The Short-Horns.—It cannot fail to be a question of general interest—in view of the three requisites which this region demands in its cattle—as to which breed answers most nearly the common want. Many of our readers will already have anticipated the response. And it is just to add that, so far as we are aware, there have been nc peculiar circumstances in the case to explain the present popularity of the Short-Horn, beyond its being the "right animal in the right place." Moreover, other breeds seem to have had, or to be now in the progress of having, a fair trial side by side with their more successful competitor.

Perhaps the first bull of this breed introduced in the vicinity was one presented to Hon. Geo. Grennell, more than twenty years ago, we believe, called "Governor," and which, although possibly not wholly of pure blood, exerted a favorable influence upon the size and character of his progeny. But the most good done by any one animal whose stock was ever brought into the county, is ascribed to "Northumberland," (4596 E. H. B.,) bred by E. P. Prentice, Esq., of this city; Mr. Childs, of Deerfield, had a bull sired by him, and all accounts agree in rating the descendents from this source as unexcelled, either in milking properties or in tendency to take on flesh, by any other strain of which crosses have been made. It is a not unimportant corroboration of what some are inclined to disregard or laugh at—the value of pedigree—that is, of long inherited and well established excellence, even in producing grades—to find, after a lapse of so considerable a period of time, the offspring of one particular animal, upon the common stock of a neighborhood, still attracting attention by their superiority, and thus vindicating those great truths that lie at the basis of successful breeding for all purposes.

The great body of the stock of the county, as has been intimated, are Short-Horn grades; there are perhaps half-a-dozen herds, smaller or larger, of pure-breds—such for example as that of Messrs. J. S. and Geo. Taylor, at Shelburne, and, among Shelburne farmers, who appear to be generally noted for their cattle, one finds every where the plain impression of Short-Horn blood. Beside the gentlemen named, there are the Messrs. Wells, Stebbins, and others whose stock was referred to in high terms. The Short-Horn is better known here as the *Durham*, and, according to locality, the character of the animals with which it has been crossed, &c., has frequently acquired other appellations for different grades, such as the "Red Durhams," the "Connable breed," &c., while the designation of "Hoosic Valley" stock is given to Short-Horns and grades descended from bulls that came from that locality at about the same time, I believe, that the "Northumberland" blood was first introduced.

More recently the county of Franklin has derived much benefit from the herd of Paoli Lathrop, Esq., at South Hadley, from which, and other sources, its Short-Horn stock has been replenished from time to time, and the character of its grades been constantly growing higher and higher.

It is of Durham grade not only that we find marks in most of the cattle that are marketed, but from it also that there frequently springs a remarkable instance of size and fattening capacity. Witness a six year old ox, now belonging to Mr. J. S. Sanderson of Bernardston, whom we should have visited but for the rain, which weighs 3,300 lbs. and was described to us by a gentleman who had just seen it, as still feeding with a good appetite and likely rather to increase than to retrograde. Mr. Grennell said he had never seen an animal "so fat and so symmetrical, the flesh so evenly laid on and the fine points so well developed and preserved." Other instances worthy of note, are three yoke of cattle fatted last winter by Jno. Ashley of Deerfield, five and six years old, live weight respectively 5,200, 5,000 and 4,975 lbs.—the lightest pair having been worked all the preceding autumn. The Messrs. Anderson, of the same town if we are not mistaken, had about the 1st of Feb. a pair of steers past three years old, which had then had meal for only about a fortnight, and would turn the scale at 3,400 lbs.

Herefords.—This breed is by no means without its patrons, whose number, indeed, we inferred to be slightly on the increase, although with respect either to milk or to early maturity, it did not seem to claim a full equality with the Short-Horn. Messrs. A. & J. A. Clark of Greenfield, T. J. Field of Northfield, T. J. M. Smith of Montague, (whose absence from home at the time of our call, we re-

gretted,) are among those who have devoted most attention to the breed in question, and among the North Bernardston farmers it is said that there is considerable Hereford blood intermingled with various other crosses.

Devons and Jerseys.—Most of the Devon blood in the county probably exists in combination with that from other sources, as it is not thought to answer well alone with regard to size, although like the Hereford, working oxen of this breed may be quicker and better matched. It is not an object generally, however, to train steers with that degree of care which is exercised where they are used for labor all their lives; the more usual practice being not to work them over two seasons, when they are converted into beef. Steers, never worked, they want to make as large as possible by three years old, so that they may then be marketed; hence, as above remarked, Short-Horns have the preference. The Jersey or Alderney cows are in good repute for the dairy, and there seems to be more of the blood in the county than we were quite prepared to anticipate, but their ugliness as beef "critters" operates much to their prejudice.

Sheep.—Mr. Grennell has made considerable effort to promote an extension of interest in this direction. We understood that sheep feeding had recently paid rather better than that of cattle. The tide seems to have turned in favor of the larger and middle or coarse wooled breeds. South-Downs are considered to stand rather at the head, but a number of Cotswolds have also been introduced and apparently suit the climate—proving thrifty, and bringing a good sized lamb at three or four months, which will sell for $5 or $6 at that age, and pay better than to keep them longer. It is an object, of course, with such lambs to have them come in as early as possible in the season. Mr. G. is trying the Oxford Downs, and thinks they will serve an excellent purpose, in crossing upon the ordinary sheep known as the "Irish Smut"—which has probably been in the county 70 or 80 years, of untraceable origin it appears, but a good sized, prolific, hardy sort of sheep, making good milkers and mothers. The wool will fetch from 30 to 38 cents, according to circumstances, but meat is a more important consideration.

Swine.—There are a good many Suffolks in the county; Mr. Grennell within a year or so has procured some of the Chester County breed through Paschal Morris of Philadelphia, which promise, he thinks, to give still better satisfaction.

Horses.—A good deal of attention has been devoted to this subject through this region, and it has produced some admirable Black-Hawk and Morgan stock.

General System of Farming.

Perhaps it is a fair estimate of the farms of Franklin county to rate them in size at an average of something like 140 acres—two-thirds of which area would probably be found in continual pasture. As a farm grows larger, however, the proportion of pasture land increases, and while it might not be more than half of one of 80 acres, it would occupy upwards of two-thirds the area of a farm of more than the average extent. Of the fields not in pasture, from one-half to two-thirds again—probably fully the latter proportion—is in meadow or hay land. Some of the Deerfield meadows are tilled year after year; it is a common thing, too, to take corn two years, and then grass one year, and so on. Since potatoes have failed, there are fewer of them planted. Spring wheat, rye, a few oats, &c., are grown, about to meet the home wants of the community. A large quantity of the best hay is cut, but none marketed beyond the village demand, as it is otherwise consumed upon the farm.

In illustration of these statements, Mr. Grennell was good enough to give me the following facts with regard to the practice of one or two farmers, of whose operations he had recently communicated an outline to the Gazette and Courier, published at Greenfield. The Messrs. Stebbins have a farm of 135 acres in Conway, "of which perhaps 45 are mowing and tillage, and the remainder pasturing. They cut over 50 tons of the best of hay, taking especial pains to cut it early; timothy just as it begins to blossom, and clover before any heads turn; the hay is sweeter and more nutritious, produces more milk and more fat. They raise four acres of corn, averaging 75 bushels to the acre, all of which is fed on the place. From two acres of oats they had 80 bushels; four acres of rye yielding 92 bushels, and they annually market about 50 barrels of apples. Maple sugar is a great crop with them, going as high as 1,500 to 2,000 pounds a year." They keep through the winter about twenty-five head of stock, and had in April "one pair of splendid dark red cattle which would weigh about 4,500 pounds, ready for market, and two yoke of handsome steers, then coming three years old;" also one yoke of heavy working oxen, and eight milch cows, one of them the mother and another a half-sister of a big steer sold by Mr. S. a year before, which weighed alive something over 3,200 pounds and dressed 2,462 pounds, when weighed two days after butchering.

Here "all the straw and stalks used for litter are cut before using, so that their long manure in the spring is short manure, and is easier handled, and saves forks enough to pay the entire trouble. They cut their oats when barely half turned in the field; the oats are heavier, and the straw as eagerly eaten by stock as the best hay."

Another farm to which we may briefly refer, is that of Mr. Isaac Barton of Greenfield, who is also an advocate, like Mr. Stebbins, for the early cutting of grass. He thinks "there is no fault so general among farmers as allowing their grass to stand too long before cutting; by mowing earlier it is true they don't get so much bulk, but the hay will contain more nutriment, will produce more flesh and more milk, and the rowen or second crop will be enough larger to pay the difference." Mr. Grennell also notices the mixture of meal which he feeds to his growing stock as "especially commendable:—to a half bushel of rye, a peck of corn, and a peck of oats, he adds three quarts of flax seed, and grinds them together; this makes a rich, nourishing provender, free from some of the objections to feeding clear corn meal. Flax seed can be bought at from $1.65 to $2 per bushel, and a small quantity will yield as much nutriment as a larger amount of such oil meal as we get at the present day."

Improvements.—One of the chief improvements in the Farming of the county is thought to be in the better plows and plowing that have been introduced of late years. They now turn over seldom or never less than seven or eight inches instead of three or four. Other implements, too, particularly harrows, horse-hoes, and cultivators, have been improved, and the use of mowing machines and horse-rakes has become almost universal. Mr. Grennell thought that the "Tedding Machine," or Hay maker and spreader, would be an important implement here, and that it would undoubtedly soon come into use.

Fruit.—The growth of Fruit has much increased, and

10,000 trees, mostly apples, have been set out the present season in the vicinity of Greenfield. Upon Mr. Grennell's farm there is a thrifty orchard of a thousand trees from five to fifteen years old—apples, with the exception of about 75 pears and 100 cherries. Peaches here were formerly fine, and as an illustration of the fact that the soil once seemed to possess some virtue for them it has not at present, it was mentioned in conversation, that a chance seedling on Mr. G.'s place once produced fruit 11¾ inches in circumference, which was shown at one of the Worcester Horticultural Society's Exhibitions.

Among the village residents in Greenfield and elsewhere, the pear is more and more becoming a garden favorite, and dwarfs and grape-vines are finding a place about a large proportion of the homes of the professional and business men, mechanics and others, who have a plot of ground that can be made to admit them. There is some difficulty in explaining why the peach has become so tender and rarely productive, but the dwarf pear seems to be uniformly successful when taken care of.

Potatoes.—It is preferred now to choose for the potato the lighter soils and to seed thin. Mr. Grennell tried Howatt's "One-Eye System" with great success, and had modified his practice to some extent accordingly, although without having altogether carried it out since the first experiment. The Carter—formerly standing at the head as a potato for the table, there, as elsewhere, has lost its size, and will produce with difficulty fifty bushels an acre. At the present time the Davis Seedling appears to rank as first in yield, quality and soundness—rather improving than otherwise as the season advances. The Prince Albert and State of Maine are also first class varieties, but do not produce so well as that last named, and the Mexican is thought to be unrivaled as a baking potato. The sort known in New-England as the Peach Blow, is evidently quite a different thing from that now so popular in New-York, and in no respect worthy of the reputation acquired by the latter.

Other Notes.—There are some other Notes which we had intended to present more at length, but which the limit already reached warns us to condense into as little space as possible. Among the measures of improvement which the Agriculture of the County has seen progressing by degrees, there are several which should not be overlooked. More attention is now given to manures. The application of artificial fertilizers has received a practical test at the hands of many, and they now occupy an established position as they should—not as the mainspring but as an adjunct of good farming. Draining has here and there been tried, and there is a manufactory of Tile in Whately. Root crops, particularly the mangold, are coming more and more into notice, and carrots and turnips are grown to a considerable extent. The capacious barns, well adapted for the purposes of their agriculture, afford us another opportunity of adding a credit mark to the account of Franklin County farmers—including often, as they do, facilities for the feeding of stock, the management of manure, the cooking of feed and the protection of roots, and sometimes also a warm corner for the poultry, a work-shop for repairs, and apartments for the storing of harness, or implements, or vehicles. The proper care and feeding of young stock as well as old, both small and large, has been discussed with intelligence and spirit. The use of oil cake finds its only obstacle in the adulterations to which dishonest dealers subject their patrons, and the proposed substitution for it of flax seed itself, as described in the practice of Mr. Barton, above alluded to, is a suggestion which we cannot allow to pass without calling to it the more particular regard of those of our readers who are placed in similar circumstances. Upon the points which we are touching in this paragraph, all and severally, as well as those previously spoken of more at length, we again bespeak the assistance of our correspondents in supplying the deficiencies or correcting the unintentional errors they may discover. It affords us pleasure to anticipate, hereafter, an opportunity of noting down some of the more prominent points in the Winter Farming of this region; but, meantime, in the operations of the Summer and Autumn, there is much that might be contributed, with general advantage, to the columns of the Country Gentleman, out of those stores of experience which the thrifty cultivators of the Connecticut Valley have been so long accumulating.

In closing here, we are passing by several Calls of interest, either proposed or accomplished. Drives, in sun or showers, over the hills that look down upon the flats, or winding between fields already promising of remunerative yield. Walks under the elms and horse-chestnuts and maples; and views over the rolling landscape, bounded by the distant heights in which New-England scenery is never wanting of its share, or—in singular contrast with many of its forms,—those two vistas—upper and lower—of alluvial verdure, between which Deerfield nestles in the shade of its grand old avenue. A fishing excursion to Turner's Falls, and the picnic-ing in which we there surprised one of our most esteemed Deerfield subscribers—a phase of Massachusetts farming which on the spot we threatened to expose. The dace and other finny stragglers which we did *not* beguile; the relics of the old masters of the soil we brought away; the tales of that border warfare that once reddened the wild rapids, now dammed and straight-jacketed and put to good practical purposes, as all the forces of earth at this age certainly should be. Of this and more, even these allusions are unnecessary and may be out of place.

But a word for the Trees is never mistimed. Owing to the impulse of prizes offered under the auspices of the Franklin County Agricultural Society, 1,255 sugar maples have been set out by the road-sides during the past year—Daniel Ballard of Wendell, Cyrus Holton of Northfield, and Alfred Belden of Whately, heading the list in these legacies for the enjoyment of another generation. Let the sons of New-England begin to appreciate the advantages of their position as it strikes the eye of a stranger, and we shall hear from fewer fathers the troubled question, "Why do our Young Men leave the Farm?"

THE CATTLE DISEASE.

Much of our space will still be found occupied by the Pleuro-Pneumonia. We think, however, that the time has arrived when we may venture to indicate conclusions with a fair degree of certainty, and a tolerable probability of their being received as impartially as they will be given. We hope, and believe that we may safely expect, to hear less of the disease in future. It has never been our opinion that there was anything to call for general alarm, and the tendency appears to be toward a more calm and dispassionate view of the affair in those districts which have hitherto been the sufferers.

1. As to the character of the Pleuro-Pneumonia, it is very

important that the now well-established fact of its being virulently *contagious*, should be borne constantly in mind. It is also proved that it may be communicated by *infection*, that is, that the places occupied or the food breathed upon by diseased animals, will give it to others, especially if tainted with the mucous discharge characteristic of its more advanced stages. That there is anything essentially *epidemic* in the Pleuro we very much doubt, although it appears certain that cases of it may spontaneously occur where circumstances are such as peculiarly to predispose the system to its attacks, and it is probably equally certain that there may be atmospheric, climatic or other peculiarities especially favorable in certain seasons or localities to its prevalency or violence.

2. Keeping these facts in view, we remark in the second place, that the Pleuro-pneumonia is *no new thing in this country*. In support of this assertion we refer to the letter from E. P. PRENTICE, Esq., on page 396—showing the course it ran in his herd five or six years ago, and the measures which in the end accomplished its extinction. If Mr. Chenery could have secured the services of some one acquainted with these facts, at the time of the first outbreak among his cattle, his own losses might perhaps have been partially prevented, and, at any rate, the vast expense and anxiety to which the whole State has since been put, would have been spared. The great lesson, to which we wish to call particular attention, not only as illustrated in Mr. PRENTICE'S experience, but also as directly pointed at in all the testimony taken before the Massachusetts committee, is, then, *that the only safety lies in isolating the different members of an infected herd*, and that the disease may be thus in no very long time wholly driven out.

3. Under the circumstances of the case in Massachusetts, for a little outline of which see the letter from our Boston correspondent—we think the action of the Commissioners should receive the cordial support of the public. The laws enacted by the Legislature are calculated to restore public confidence, and the report of the investigations now concluded, will diffuse just the needed information over the country, so that we hope to hear no more of the *spread* of the disease, for, should it anywhere appear, the means of keeping it in check are entirely within the reach of all.

4. It may be remarked, however, that there should be little confidence reposed in the numerous rumors of its breaking out here and there, over the country, for any affection of the lungs or other ordinary illness among cattle will be very likely to be represented as the pleuro-pneumonia for some time to come. Unless the opportunity for the influence of contagion or infection is clearly known to have occurred, the *presumption is, in every such instance, that something else is the matter.* If there is real cause for suspicion, let the endangered herd be at once separated—one, or at most two or three animals by themselves in any one field or building, and kept thus isolated at whatever cost of time and trouble, until the whole danger has passed by.

5. We trust that the Massachusetts Commissioners will at once carry out the provisions of the law for the establishment of a hospital or quarantine, by the adaptation to this purpose of some farm and range of buildings where the disease already exists, and where it may be fully studied, both in its own developments and in the action of the contagion and infection upon healthy animals introduced for the purpose of experiment, and which need by no means be of an expensive kind. The poor-house establishment at New-Braintree, where we witnessed last week the examination of some infected cows, would afford a good spot for the purpose, and investigations might there be conducted, which, so far as our reading has extended, have no prototypes in Europe with all that has there been said and done upon the subject.

6. When such a hospital is once known to exist, accessible to the visits of interested scientific and practical men, it will be very well that delegates from other States should have the opportunity of acquainting themselves thoroughly with the disease, so as to be able to distinguish its symptoms from those of other complaints. There will then be some one in every locality, who can be called in quietly where attack is suspected, and at once either put down unnecessary fears or take proper measures to meet the exigencies of the case, without application of any sort to official authorities, or crying out through the papers that the whole cattle of a town or county are dying, before it is really ascertained whether there is one that is seriously ill. Some one qualified medical observer will be better for this purpose than three or four uninstructed and less capable visitors who would go and return in a day or two really no wiser than they went.

— As to the present condition of affairs in Massachusetts, the more light we can get upon the subject, the more we incline to the opinion that for two months back there has been little reliable evidence of the extension of the disease beyond the limits it then occupied. After a state of general commotion, whether well founded or not, there generally comes a season of calm, and unless we much mistake the tendencies of the public mind, the excitement upon the Pleuro-pneumonia has already passed its highest point. We do not *know all about it*, even now, it is true; but we know so much that we have no longer an ill-defined goblin to contend with, but an enemy, sufficiently ugly, we do not deny, and by no means to be despised—but still one which, if properly restrained and imprisoned, will work out, in a great measure, his own extinction. Without neglecting caution, there is no reason for lack of courage; and it is our earnest recommendation, as the best source of public security, that each man attend as judiciously and earnestly as possible to the welfare of his own stock, without inundating the public with surmises, or depending upon Commissioners to kill or cure in his behalf, and upon the public treasury for a premium upon any complaint which he can distort into the guise of this troublesome and noisy invader.

The Pleuro-Pneumonia here Six Years Ago.

The following is the important letter from E. P. PRENTICE, Esq., of Mount Hope, near this city, to which we allude particularly in the leading Note upon page 400 of this number of the COUNTRY GENTLEMAN:—

MESSRS. EDITORS—I notice that a good deal of alarm is felt in different parts of the country about what is called the cattle disease.

From the diagnosis given in the papers, I have no doubt this is Pleuro-Pneumonia, with which I had some acquaintance a few years ago. If it is the same, my observation and experience may be of some service to those suffering now.

It was introduced into my stock in the fall of 1853, by one of my own cows, which in the spring of that year I had sent down to my brother in Brooklyn, to be used during the summer for milk. She was kept entirely isolated throughout the summer, and in November was sent up by the boat. There were no other cattle on the boat at the time, nor could I learn that she had come in contact with any in passing through the streets on her way to the boat, and she certainly did not after leaving it, until she mingled again with her old companions, all of whom were then and long afterwards perfectly healthy. After she had been home about two weeks we noticed that her appetite failed, and her milk fell off; she seemed dull and stupid, stood with her head down, and manifested a considerable degree of languor.

Soon her breathing became somewhat hurried and with a very decided catch in it; she ground her teeth, continued standing, or if she laid down it was only to jump up again instantly. Her cough increased, and so too a purulent and now bloody discharge of mucus from her mouth and nostrils. The excrement was fetid, black and hard.

In this case we twice administered half a pound of epsom salts, and afterwards a bottle of castor oil. Very little but a temporary effect was produced by these doses.

The symptoms all increased in intensity, strength di-

minished, limbs were drawn together, belly tucked up, &c., until the eighth day, when she partly layed and partly fell down, and never rose again.

In a post-mortem examination, the lungs proved to be gorged with black, fetid blood, the substance of them to be thickened, soft and pulpy. The pleura and diaphragm also showed a good deal of disease and some adhesion.

This cow on her arrival here was put into her usual place in the stable, between others. She remained there for two or three days after she was taken sick, before we removed her to the hospital.

In about three weeks from the time she died, one and then the other of those standing on either side of her were attacked in the same way, and with but two days between. This certainly looks very much like contagion, but my attention had not before been called to this particular disease, and to suppose inflammation or congestion of the lungs contagious, was so opposed to my preconceived notions that I did not even then admit it, and these animals were suffered to remain with the others until their own comfort seemed to require the greater liberty of open pens.

One of them was early and copiously bled twice, while epsom salts were administered both by the stomach and with the injective pump. The other we endeavored to keep nauseated with ipecacuanha, and at the same time to keep her bowels open by cathartic medicines. All proved to be of no avail. They both died, the one in ten and the other in thirteen days. Before these died, however, others were taken sick. And thus later I had eight sick at one time.

The leading symptoms in all were the same, with minor differences, and so too was the appearance after death on examination.

Of all that were taken sick (sixteen) but two recovered, and they were among those we did the least for, after we had become discouraged about trying to cure them. In all the last cases we made no effort at all, but to keep them as comfortable as we could.

In one case the acute character of the disease changed to a chronic, and the animal lived six or eight weeks, until the whole texture of the lungs had become destroyed. She had become much emaciated, and finally died with the ordinary consumption.

At the time the first case appeared I had a herd of thirty-one animals, all valuable Ayrshires, in fine condition and health. In all the first cases I had a veterinary surgeon of considerable celebrity and experience, and every ordinary approved mode of treatment was resorted to and persevered in. The last cases, as before intimated, we only strove to make comfortable.

After I paid the third or fourth forfeit, I began to wake up to the idea that the disease was in a high degree contagious, whether I would have it so or not, and that my future security was in prevention and not in remedy. I therefore separated all the remaining animals, in no instance having more than two together, and generally but one in a place.

All were removed from the infected stables and put into quarantine. Isolated cases continued to occur for some weeks after this, but the spread of the disease was stayed, nor did a single case occur after this, which we did not think we traced directly to previous contact.

It is impossible to account for the first case of which I have spoken. But as the cow in that case was put into a sales stable in New-York while waiting for the boat, though there were no cattle then present, yet I have supposed it not unlikely that diseased animals had been there, and had left the seeds of disease.

But account for this case as we may (and I have no doubt it is sometimes spontaneous,) I feel convinced it is very highly contagious, and that the only safety to a herd into which it has been introduced, is in *complete* isolation, and in this I feel, as convinced, there *is safety.*

My cattle were not suffered to return even to the barn-yard, or to any part of the cattle barns, except as invalids were sent to the "hospital" to die, until late the next fall —i. e. the fall of 1854. In the meantime the hay and straw had all been removed, the stables, stalls, cribs, and all, thoroughly scrubbed with ashes and water, fumigated and whitewashed with quick lime. I have had no case since, and am persuaded I should have avoided most of those I had before, if I had reasonably admitted the evidences of my senses in the second and third cases.

Mount Hope, June 14, 1860. E. P. Prentice.

MR. ALEXANDER'S SALE.

The sale took place as advertised, on the 13th inst. The threatening aspect of weather in the early morning changed about 10 o'clock, and the day proved a delightful one. The attendance was large, and contained a sprinkling of breeders from Ohio, Indiana, New-York and Connecticut. The prices were higher than realized last year, as the stock was also of better quality. It will be seen from the following statement, that several animals found Eastern purchasers:—

COWS AND HEIFERS.

1.	Orba 2d, Robt. Clarke, Ky.	$100.00
2.	Mary Ann 18th, G. W. Anderson, Ky.,	77.50
3.	Many Ann 20th, J. B. Dun, Ky.,	125.00
4.	Mary Ann 22d, S. W. Robbins, Conn.,	150.00
5.	Chance, 5th, S. W. Robbins, Conn.,	205.00
6.	Pearlette 2d, J. S. Johnson, Ky.,	205.00
7.	Mary Cattley 2d, Ezra Cornell, N. Y.,	130.00
8.	Prune 3d J. B. Dun, Ky.,	85.00
9.	Emma 2d, J. O. Sheldon, N. Y.,	200.00
10.	Filligre 4th, J. O. Sheldon, N. Y.,	190.00
11.	Pearlette 3d, S. W. Robbins, Conn.,	205.00
12.	Maid Marion 5th, S. W. Robbins, Conn.,	235.00
13.	Rosamond, E. Cornell, N. Y.,	200.00
14.	Lilla Languish, E. Cornell, N. Y.,	75.00
15.	Eveline, J. W. Jones, Ky.,	100.00
16.	Mary Allen, Mr. Shields, Mo.,	155.00
17.	Margaret Allen, Mr. Shields, Mo.,	70.00
19.	Idle Girl, Jas. O. Sheldon, N. Y.,	150.00
18	Cows and Heifers, averaging $152.63—total,	$2,747.50

BULLS.

1.	Lord Languish, Rankin Baldridge, Ind.	$225.00
2.	Derby Duke, Merritt O'Neal, Ky.,	170.00
3.	Fitz Bell, Rufus Bryant, (Shakers,) Ky.,	162.50
4.	Juniper, John Monett, Ohio,	107.50
5.	Election, Mr. Shields, Mo.	80.00
6.	Marske, J. S. Wolfork,	165.00
7.	Volunteer, Jno. G. Dun, Ohio,	275.00
8.	Phantom, W. B. Hudson, Tenn.,	90.00
9.	Rataplan, D. S. Huffstotter, Ind.,	105.00
10.	Morisco, C. C. Crisman, Ky.,	87.50
11.	Zinganee, C. A. Stevenson, Ky.,	35.00
12.	Falconer, R. W. Scott, Ky.	157.50
13.	Langar, J. R. Ward, Ky.,	205.00
14.	Mogul, R. G. Dun, Ohio,	330.00
15.	Peter, R. Weisiger, Texas,	75.00
16.	Marion, B. C. Bedford, Ky.,	360.00
17.	Fordham, John Ross, Ohio,	140.00
18.	York, J. B. Wilder, Ky.,	155.00
19.	Hopeful, Dodd Helm, Ky.,	50.00
19	Bulls averaging $153.42—total,	$2,915.00

S. T.

☞ To the account of Mr. R. A. Alexander's late Sale, given above, should be added the Imported Bull "El Hakim," sold for $250 to J. R. Bryant, Pleasant Hill, Ky. A number of South-Down sheep not then reported, were also disposed of, and the following is a correct recapitulation of the whole:

20	Short-Horn Bulls sold for..	$3,165.00—	average per head,..		$158.25
18	do. Cows & heifers,	2,747.50—	do.	do. ..	152.63
38	head of cattle,	$5,912.50—	do.	do. ..	155.59
9	South-Down Bucks,	391.00—	do.	do. ..	43.44
6	do. Ewes,	194.00—	do.	do. ..	32.33
	Total of all sales,	$6,497.50			

[For the Country Gentleman and Cultivator.]

Charlotte Russe.

Messrs. Editors—I will give you a recipe for Charlotte Russe, with the directions for making it, which I consider in a recipe quite as essential as the ingredients:

1 ounce of gelatine.
6 ounces of sugar.
Yolk of four eggs,
1 quart of cream.
1 pint of milk.

Dissolve a *little* less than one ounce of gelatine in a pint of lukewarm milk—then scald it, and put it upon the beaten eggs and sugar—stir them well together—set aside till it becomes lukewarm—then season it well with vanilla, (some use brandy also)

Whip the cream while the mixture is setting, and skim the froth as it forms. The day before make sponge cake—the weight of eggs in sugar, and half the weight in flour. Mary.

Inquiries and Answers.

Rose Bugs.—Will you please tell me through The Cultivator, what will protect cherry trees against the ravages of the rose bug—also when to slit the bark of such trees. J. S. Ewell. *Byfield, Mass.* [We know of no remedy for the insects but to kill them. When very numerous, they have been knocked off the trees on sheets and thrown into hot water. We are not aware of any advantage in slitting the bark of trees.]

Cedar Berries.—When is the proper time to gather the red cedar seeds? If gathered in the fall should they be exposed during the winter? R. [A suitable time is late in fall or during winter—they may be washed off the pulp and mixed with moist sand, exposed to frosts, and planted in spring. They will grow the first and second years.]

Plaster.—I wish to question in regard to plaster. In planting my potatoes, I experimented with plaster. On one half of the land I put a tablespoonful in each hill. The land seemed to be better than the other part; the season was dry, but the yield was much less where the plaster was used, than on the other and poorer part. I think the soil contains a mixture of iron. Would that have an effect upon the plaster? What is the opinion of your readers in regard to it? I have also sown plaster broadcast upon my mowland, and could perceive no benefit therefrom. Elihu Brown. *Blandford, Mass.* [On some soils, plaster is no benefit, and it is needless to apply it. We do not think it injured the potatoes, but that the diminution was owing to other accidental causes.]

Yellow Clover.—Enclosed you will find a specimen of the flower and stems of a species of grass which has rooted out the clover in my fields, and in those of some of my neighbors, and which I would like to know the name of. Supposing you would be likely to know, I send it to you with the request that you will give its name and the best method of eradicating it. I am plowing it under. J. W. D. *Mount Holly, N. J.* [The plant sent is the *Trifolium procumbens*, or yellow clover, an introduced foreigner, a somewhat troublesome weed in some places. Plowing under and good cultivation will eradicate it.]

Paint for Stopping Cracks.—I have an upper porch the floor of which leaks and lets the water down on to the lower floor, and it also leaks where it joins the house. Now will you tell me what to do with it? What kind of *paint* can I use on it, that will fill up the shrunken places, (pine,) and be permanent and cheap? M. *Marshall, Ill.* [We know of nothing better than white-lead paint, and where the cracks are large, the paint may be thickened to any desired degree my mixing in with fine clean sand—making it thicker acoording to the size of the cracks. This we have found excellent for all kinds of leakages in wood-work.]

Influence of the Moon's Shadow.—Some of the good old farmers here tell me there is a time, governed by the changes of the moon, for planting potatoes, transplanting shrubbery, laying fence, deadening timber, putting on house roofs, &c., &c. One thing tends to make me incredulous—that is, that some of the wise ones are governed by the changes of the moon—others by the ascent and descent of the sign. If the changes of the moon or the signs have any effect upon timber, vegetation, the soil, or anything else with which farmers usually have to deal, I should like to know what it is. Will you please inform me what the opinion of scientific men is on the subject. Young Farmer. *Va., June* 1860. [Our correspondent will perceive by a moment's reflection, that the mere circumstance of the sun shining on this or the other side of the moon, 240,000 miles off, could not possibly have any effect on the things of this world. Careful journals have been kept for years by scientific men, and no general result could be reached, although limited observations would sometimes bear towards one rule, and again towards another, as accident happened to lead. We are aware that some farmers have favorite notions on this subject, some one way and some another, and that being fixed in their belief, one accidental coincidence serves more to establish them, than twenty exceptions would do to upset their opinions. The light of the moon at night has been claimed by some as affecting vegetation—but as this light is but little more than half a millionth part that of the sun, a single day of sunlight would do more good than all the light of the moon from the days of Adam until now.]

Preserving Fruit in Alcohol.—Will you please inform me how to put up cherries, currants, &c., in spirits, so as to preserve and not take all the color out of them? I have tried brandy and diluted alcohol, but they take all the color out; and I have seen them colored very naturally, and would like to know how—and likely many of the readers of the Co. Gent would be benefitted by the information Subscriber. *Barnesville, Ohio* [Will some of our readers who possess practical skill, please give us a description of the process, at an early day?]

Bone Dust for Turneps.—In last Co Gent. a correspondent wishes to know what the effect of sulphated bones is on turneps. I have not used any of it, but have the dust. Last summer I sowed 200 pounds of dust on 70 square rods of ground. Product 200 bushels of the finest turnips that I ever saw—got plenty that weighed five pounds with the tops and roots cut off. Some of the seed came up where no dust was sown, and the turnips were not as big as a silver dollar; have used four tons of it on grass, and see the effects in a much greater yield. M. Gowdy. *O'Bannon's, Ky.*

Colebrook Seedling Potato.—A writer in The Homestead, speaks of this variety as an excellent table potato, especially for summer use. He says, "They are large, smooth, very productive, and free from rot. At this season, when potatoes begin to grow soggy and distasteful, these are dry as meal and pleasant to the taste." We would be glad to know more of this variety from those who have grown and used them. Tyro.

Sudden Death of Sheep.—As we have received much valuable information from the Co. Gent., I now write to solicit information on a subject that may perhaps prove pecuniarily interesting not only to myself, but to many of your readers. For the past few weeks I have been losing my sheep, and am at a loss how to account for their death. Those that I have noticed before death, have a frothing at the mouth and bowels much distended. They are in fine condition, and on opening them could find nothing indicative of poison or disease. We have lost sheep from eating Ivy, all of which turned green before they died, or in other words their flesh assumed a greenish hue. The flesh of those I have lost recently, has its natural color. We have examined the field, (which is clover and blue grass,) and could find nothing that I would consider poisonous to a sheep. Any information that you or your readers can impart on the subject, will be gratefully received. *Mont. Co., Md.* Jas. E. Jones.

Black Ants.—Will the editor please inquire through the columns of the Country Gent., if there is any remedy for the common small black ant in gardens, as mine is almost overrun with them; the leaves of the flowers looking as if they had been pierced with an awl, and I can find nothing else to charge the destruction to but these ants. Mrs. D. C. Nye. [We have never been seriously troubled with ants, and therefore give briefly such remedies as we have heard recommended, with the request that our readers will furnish such as they know to be better: smear the inside of a vessel with honey, and invert it over their nests or places of most frequent resort, and when covered with them, jar them off into boiling water. Flour sulphur sprinkled on their haunts is said to repel them. Spirits of turpentine, poured on their hillocks destroys or disperses them Bottles partly filled with sweetened water attract them, and imprison and drown them.]

Butter Dairy.—Will you please give in the columns of your journal a plan—with cost-estimate—of a butter dairy and ice-house, which will accommodate the milk of thirty to fifty cows. Situation, a hill slope on north side of dwelling. A small stream of spring water is near at hand which I can easily introduce into the house, and on the north a yard where I propose keeping my swine. A. B. [We should esteem it a favor if some of our readers in the dairy districts, who have given attention to the erection of such dairies as our correspondent inquires for, would furnish us a plan or design, with accompanying explanations and estimates.]

Blood Spavin.—I have a valuable mare who has a blood spavin (as it is called,) forming, and I would be glad to know if there is any cure, remedy, or relief for the disease. There is now a swelling of about the size of a hen's egg, near the center of the joint, which, after considerable exercise, will disappear, but return again with the usual stiffness while standing in the stable. Can anything be done to help it? *Bath, Me.* K.

Hydraulic Ram.—Could you or any of your subscribers give through the Cultivator a description or an engraving of a hydraulic ram, capable of raising water 100 feet, with the price and where it can be bought? An Old Subscriber. [We have so often published engravings and descriptions of this apparatus that our best way is probably to refer the inquirer directly to the implement catalogue of almost any extensive dealer. For example, Emery Brothers, or W. W. Eggleston of this city, would probably supply him at once with all needful particulars.]

[For the Country Gentleman and Cultivator.]

OATS AND CARROTS TOGETHER.

MESSRS. EDITORS—I notice in the Co. GENT. of May 17, REPORTER wishes to learn the experience of those who have tried the experiment of raising oats and carrots together. As it is a rainy day I feel tempted to comply with the request, and give my experience upon the subject. It is some six years ago May 1, that, after sowing a piece of oats, I sowed about an eighth of an acre to carrots, by way of experiment. The ground was a sandy loam, in corn the year before, and well manured. The oats were sowed broadcast by hand, and the carrot seed by a seed sower. The oats were very heavy, and some of them lodged. After harvesting the oats, the horse and small plow were passed twice between the rows, which were about the distance we usually plant corn. The carrots were then carefully hoed and weeded by hand, and a little home-made poudrette applied to each plant, and the poudrette covered with a little loose earth. Little or nothing more was done to the carrots until harvest. Product, 51 bushels.

I have not continued the practice, because I do not think oats a profitable crop for me to raise, except where I wish to sow clover or other grass seed. I seldom fail to get good clover after oats, and I am pretty sure to get good herds grass and red top after clover, unless it is some dry, sandy plain. Clover fails after being mowed one season.

Chicopee, Mass. M. S. K.

[For the Country Gentleman and Cultivator.]

DISINTEGRATION OF SOIL.

No discovery has been so important in its results since the invention of the plow, as that of underdraining in the preparation of the soil. And the requirements of the soil in respect to its drainage, should be inquired into even before the plow is ready for action. The first of all duties in the preparation of land, seems to be that of ridding it of superfluous moisture, so that no standing water may remain about the roots of plants, keeping them continually cold and wet, but that they may stand in dry ground, and a warmer temperature be made to pervade the soil as far as the roots of plants usually go.

Open drains of very ordinary character, show clearly the value and necessity of such a change when the ground is not naturally dry. As soon as this is accomplished, wherever it is necessary, the soil is to be broken for culture; and the deeper the better—not that the lowest soil, to the depth of three feet or more, should be turned upside down above the surface soil, but loosened; mixed it may be, with sand or gravel, if too clayey and hard.

The experience of every day in gardening, makes it as plain as the nose on a man's face that plants delight in and are benefited by growing in a loosened subsoil, where all their energies are not at task to enable them to push their slender roots through the hard clay. It is a marvel that they are able to make any growth in such soil, and we wonder that they live at all, since naturally grown plants are of little value when compared with their improved condition under cultivation; and it was not designed that plants should perfect their character and the amount of their productions without cultivation, but that they should develop their perfections under the intelligence and ingenuity of man. When growing in a hard subsoil, (though the effect is not so apparent upon forest trees of large size,) little nourishment can reach the lower fibers from the surface of the soil, and they must be compelled to feed almost entirely by means of their upper fibers and rootlets.

By thoroughly loosening the subsoil and trenching it deeply, when united with thorough draining, the manure at the surface has gradual access to the spongioles of the lower roots of the plant; and the roots, on account of the openness of the subsoil, are not forced to retard the expansion of the plant above the surface, but increase in equal proportion; moreover the air has access to the subsoil, and permeates it more or less, changing the character of offensive matter, and neutralizing acids injurious to the growth of the plant. Too thorough trenching is hardly possible. Successful nurserymen and fruitgrowers, who make large trees, in a few years, out of small ones, and even from seed, (as is oftener the case,) and cover them with fruit, or load them with rich foliage, are careful to attend to trenching and drainage. They will show you trees of five years growth, exactly twice the size under this management as under the common mode of letting them take care of themselves and do their own subsoiling; and will tell you the latter mode of procedure, is like casting a child of early age upon the world to attend to its own support and education.

Trenching in gardening, and subsoiling in field culture, combined with underdraining, is a sure protection from the effects of drouth. G. P. S.

Draining---Its Importance and Results.

The following is one of the numerous letters written by our correspondent, JOHN JOHNSTON, in answer to the many private inquiries addressed to him. We copy it from the Chester Co. (Pa.) Times, to which paper it was communicated by the gentleman to whom it was addressed:

C. F. TAYLOR, Esq.—In answer to your questions respecting the increase of crops by draining, you must be aware that it will depend wholly upon how wet the land is before draining. For instance, I purchased ten acres from a neighbor of mine some fifteen years ago, in order to get an outlet for a number of my drains. That land would not produce any kind of grain,—at least, not half enough to pay the cost of tillage. My first crop, which was corn, was a very large one, and the proceeds therefrom were sufficient to pay the expenses of draining, as well as the cost of the land. On a field of twenty acres, which I have owned for nearly thirty-nine years, I could neither raise corn or winter wheat before draining; but my first crop of corn after draining, yielded over eighty-three bushels of shelled corn to the acre, and that is a very great crop for this part of the country. In fact, I don't think it was ever equalled for the same number of acres together, in Western New-York. This field has been drained about twenty years, and last harvest I got a plump thirty-five bushels of wheat per acre, which was sown on barley stubble, once plowed.

My neighbor, from whom I bought the ten acres above referred to, was greatly opposed to draining at the time; but when he saw the corn and wheat I raised on the land after thorough drainage, he commenced draining his own land, with equally good success. Almost every farmer in this neighborhood has done more or less tile-draining. We have a great many tile-works now,—I believe eight within about six and a half miles of where I write. Some of the machines are worked by steam-power, some by horse-power, others by hand,—and yet a great many more tiles would be used, if they were made. Some farmers are draining with stones, where they cannot get tiles; but the latter are by far the cheapest, because the ditch for stone-drains has to be a great deal wider, and costs about double of those for tiles; then, the laying of the stones costs half as much as tiles cost here.

I am not one of those who believe that all land requires draining; still, much more requires it than any man can suppose who never drained any. A good way to prove whether land needs draining or not, is to dig a hole or holes, say two and a half to three feet deep; and if, at the end of eight or ten hours, water stands in them, your land needs draining, and will pay for it. In protracted drouths, however, the water may be dried out of land which at other times would be too wet for tillage.

Believing that thorough drainage is the foundation of all good husbandry, and that the farmers of this country are but half awake, as yet, to the importance of it, I am glad to see the increased interest manifested in the subject, in different parts of the country. Twenty-one years ago, I was the only man using tiles on this continent, and there was but one person manufacturing them; now, the demand for tiles wherever a machine has been erected, cannot be met. JOHN JOHNSTON

[For the Country Gentleman and Cultivator.]

PEARS ON QUINCE STOCKS.

SAWBRIDGEWORTH, ENGLAND, MAY 16, 1860.

Some months since I remember seeing in the columns of your excellent and interesting journal, an inquiry whether my plantation of Louise Bonne pears on quince stocks, was still in being. I have much pleasure in saying that my trees, now twelve years old, are perfect pictures of fertility, being at this moment, (May 16th,) just on the eve of setting a most abundant crop of fruit, as we have not had any late spring frosts to injure their blossoms. My plantation of this sort numbers just 2,000 trees. They stand five feet apart in the rows, and 24 feet apart row from row, standing north-east and south-west. The spaces between the rows are occupied with young fruit trees, mostly trained trees for espaliers and walls, and as these are highly manured, the pear trees partake of the benefits of such cultivation, and I may add interfere but little with the usual nursery operations in educating espaliers and pyramids. You must understand by educating I mean the pruning, training, and biennial removal of such, for in this country, trees full of blossom buds, and roots a perfect mass of fibres, so as to bear the first season after removal, are much desired and well paid for. This I call education, which is carried on four, six or eight years before the trees are sold.

When I planted my Louise Bonne pears five feet apart tree from tree in the rows, I calculated on removing every alternate tree at the end of five or six years; but to my agreeable surprise their side branches do not nearly touch, and I begin to think they may remain as they are for several years to come. My pruning is very simple; every year after the fruit is gathered, the shoots of the preceding summer are shortened to about four inches, or from two to four inches, with pruning scissors. The trees that are not very vigorous, the latter length. If they were fancy trees, I should in June pinch in closely the shoots inclined to be vigorous, at the upper part of the tree; but I now tell my simple practice, because it answers well, and can be done by any good laborer.

As usual with beginners, I made some mistakes in planting, for a part of my plantation was made before the ground was trenched, so that after that operation I found my trees too deep in the ground, and too near the clay—these I had raised, and now they are all right. I still hold to the proper medium in planting, and cover the stock *up to the junction with the pear, but not over it.* I will tell you why. Some few trees which were covered over the junction, struck root from the pear immediately, putting forth large roots, which penetrated the clay subsoil to the depth of six feet—*growing vigorously*, but bearing but few fruit. These trees are better looking than those confined to the quince stock; their leaves are greener, and their shoots (much inclined to canker) are stronger, for owing to my soil being highly calcareous, the leaves on the other trees on quince roots are inclined to be yellowish, and the fruit of a bright crimson, of high flavor, and perfectly beautiful. I give these trees, biennially, a surface dressing of soot, in a circle round each tree three feet in diameter; this corrects the tendency to turn yellow, and seems to answer well. In the neighborhood of Paris, thousands of pear trees on the quince may be seen with a yellow tinge on their leaves, owing, as in my case, to the calcareous soil. It is to me very interesting to find all my Louise Bonne pears confined to the quince stock, without a single spot of canker, while those, as I have said above, on the deeply rooting pear, are much cankered, thus showing how necessary it is in cold soils to keep the roots of trees on the surface.

I have been much interested by the excellent practical articles in your columns on pear culture, by "G. P. Norris," "C. Smith," and, above all, by "T."—the latter has indeed left nothing to say.

My idea of planting pears for profit may, however, be worth giving to your readers. A small plantation, well done, is infinitely preferable to covering several acres with trees planted thinly and badly. I will merely say what I should do were I in your country, and about to make a pear plantation for market. I should begin with an acre of good loam, rather inclined to clay than sand. I should mark out my rows from north-east to north-west, so that the mid-day sun would shine between the rows.

I should plant my trees six feet apart, tree from tree in the rows, and eight feet apart row from row; an acre will hold at this distance, about 850 trees. The space between the rows I should keep stirred with the horse-hoe all the summer, and between the trees I should use the hand-hoe. The mode of planting, manuring, &c., &c., is so well given by "T." that scarcely a word is required.

As to choice of sorts, this must be according to climate and experience gained; but Louise Bonne as a market pear is unrivaled. The Bartlett, or Williams', is here almost too fleeting. A pear likely to be very valuable for market, coming after Louise Bonne, is Doyenné du Comice, and Beurré Superfin, although rather a thin bearer when young, will prove of great value, as it bears freely when six or seven years old. The Beurré Hardy is a robust grower—its fruit very large and handsome, and of excellent quality; it is quite worthy of a trial. Another pear likely to be of consequence to your growers, is Beurré Clairgeau; this keeps well through November, and is "very good," and most beautiful. To make it quite safe, it should be double worked on some good growing sort, such as Beurré d'Amalis, or best of all, Prince Albert—this is the most free-growing pear on the quince known, the union with the stock is so perfect.

I shall bud this season, 10,000 of this kind merely for double working, and your nursery-giants (for they are not men,) will soon work 100,000 annually for the same purpose. In short, with, I think I may say, the majority of our *fine* pears, this system of double working is the only way to make their culture *quite* safe.

Yours truly, THOS. RIVERS.

WHITE CLOVER IN PASTURES.

The growth of white clover on soils natural to its production, may be encouraged and promoted by a top-dressing of plaster and ashes. Its chief value is for pasture, as it is of too dwarf a growth to give much of a hay crop, A writer in the Boston Cultivator says "there is an advantage in pasturing white clover which does not strike every farmer. Each joint furnishes a fresh root, (and of course a fresh plant,) whenever such joint comes in close contact with the soil, consequently the more it is trodden the thicker it will spring up. Hence one reason why it grows most luxuriantly near the bars and gateways of our pastures, where cattle often congregate."

Many farmers have observed this last mentioned fact without getting hold of the reason thereof. The natural growth of various grasses, self-sown upon all our soils, is a matter of curious interest to the naturalist and the farmer observant of nature.

[For the Country Gentleman and Cultivator.]

BALLOON FRAMES.

We don't pretend to build any thing else in this prairie country. I have never known one to crush even by the wind; yet I have known them to move from their foundation. (I do not speak of our *tornadoes*, against which neither timber nor walls will stand.) Six years ago I built a good sized two-story dwelling, *balloon*. I boarded it horizontally upon the studing, with good straight-edged rough boards, telling the carpenters that I would find nails if they would drive them. The hint was taken, and plenty of nails were driven. Over these rough boards I covered with flooring, perpendicular and matched. Painted a heavy cream color. It makes a very good appearance *through the trees*, which have considerably grown up since our Senior Editor was here three years ago.

We prefer this wood structure to brick. It is dryer, and a little more air and health.

But the part which I value most for its trifling cost and simplicity, is its foundation. The sills are of plank, 2 by 12 inches, laid upon a 9 inch brick wall. The cellar wall is of stone, 18 inches thick, upon which the joists are laid in the same manner as if I was building a brick house. Then the two-inch sill is laid upon the brick foundation, laping four inches on the ends of the joist, which are cut down at the end two inches, to make the sill level, upon which to lay the floor. Then between the ends of these joists, brick are laid up, with a two-inch space between the outer and inner walls, to keep out the frost, and it does it quite well.

A house thus built into the foundation, will not slide from it nor lift up easily. It is my invention, not patented, and I give it free for those who wish to use it. I like it very much. If I were to build again, I would use coal tar or pitch upon the sill and stud mortices, for I fear it will rot too soon. SUEL FOSTER. *Muscatine, Iowa.*

LETTER FROM JOHN JOHNSTON.

NEAR GENEVA, June 6, 1860.

MESSRS. TUCKER & SON—Tell your correspondents who want bones ground, that if they have a plaster mill near, they can have them ground just as they wish. I got a ton ground a month ago, and am experimenting on corn—will also on grass and wheat this fall. I tried bones on wheat some twenty years ago—think they paid, but will be a little more particular this time.

I have also had a ton of limestone ground as fine as plaster, to experiment with on wheat. I have long thought of trying it. Wherever I have seen limestone dressed in a field for building, that field always brought large crops afterwards for many years. I intend to put a ton on half an acre. The ton cost $3 at the mill five miles distant. I have nearly another ton to get home. I will try it on different kinds of soil.

Every thing is growing rapidly—wheat in full ear, or nearly so.

I had the bones ground as fine as corn-meal—put at the rate of 5 cwt. to the acre, on three strips in the corn field—will know by September if any benefit.

Our green peas are nearly ready to cook, earlier than I ever saw before; and, excepting last year and 1845, I have no recollection nor no memorandum of wheat being so forward at this date. If the weather keeps warm, I shall have one field of wheat ready to cut by 5th July.

Tell Mr. BISSELL if he gets no run of water in his stiff clay, it is of no use to drain it; it would be folly to lay tile where no water is. For a garden it might be trenched 18 to 24 inches deep; then the water that falls on it would find its way to the tiles; but all stiff clays that no water will circulate through, can never pay for underdraining, unless they are deeply trenched or subsoiled some two feet deep. Still if there is land adjoining, and of a more porous character and laying higher than the clay impervious to water, draining that land and carrying it through the hard clay will prevent the water from coming over the clay, it may ultimately become mellow when not water-soaked from the higher land. *Experiment—dig holes on the higher land and see if water rises. If it does, you can drain.* JOHN JOHNSTON.

[For the Cultivator and Country Gentleman.]

THE KIRTLAND RASPBERRY.

MESSRS. L. TUCKER & SON—I noticed an article in your paper a week or two since, in reference to the Kirtland raspberry, from Mr. W. Heaver of Cincinnati, and having had some experience with this raspberry for the past three years, thought a few items might be of interest. I find it a very strong, vigorous grower, a most profuse bearer, and the fruit of good size, and, to my taste, of excellent quality. In color a deep, rich red, and of sufficient firmness to bear carriage well. In flavor, it seems a pleasant mingling of the rich sweetness of the best of the Antwerps, with just enough of the taste of the wild raspberry to redeem it from a suspicion of insipidity. Tastes differ; but the Kirtland is to me pleasanter in flavor than even Brinckle's Orange. But its greatest excellence, in my view, is its *perfect* hardiness. It requires no protection from the severest weather in winter, and last year it endured uninjured our terrible "5th of June frost," which destroyed the fruit of the Lawton blackberry, and every other raspberry on my premises, including the wild native. At the time of the frost above mentioned, raspberries were setting their fruit, and were filled with bloom and half grown berries. The Hudson River Antwerp, Brinckle's Orange, Fastolff, Franconia, Allen, and all others in the same situation and exposure, were entirely destroyed, while the "Kirtland" bore an abundant and beautiful crop.

GEO. W. CAMPBELL.

[For the Country Gentleman and Cultivator.]

CHEAP DRAINING.

Mr. David Callanan of Callanan's Corners, N. Y., is what I call one of the best farmers in Albany county. He has a farm of about 200 acres, which he commenced tile draining some six or eight years ago. But the great drawback has been the enormous cost of digging drains, as his land is pretty much all strong yellow clay, intermixed with small stones. A three-foot drain, dug by hand, could not be done at a cost less than 30 cents per rod, as a man had to use a pickaxe to break it loose, which makes it a very slow and costly operation.

The other day I took a trip out to his place. I found him hard at work, with half a dozen men engaged in draining. He was using a ditch digger—one of his own invention. It is cheap, simple and durable, and I must say it is far the best ditching machine I ever saw in operation. It is so arranged that he can cut a drain any width and depth required. It is capable of cutting a drain from two to eighteen inches in width, and from two to six feet deep. It makes a drain far superior to anything I ever saw dug by hand. It requires two teams of horses or oxen, and three men, or one man and two boys to use it. Mr. Callanan informed me that he was getting his drains cut three feet deep for about 7½ cents per rod. A ditch the same depth, made by hand, had cost him 30 cents, and sometimes more, which makes a difference of about 22½ cents per rod, which will more than pay the cost of tile and freight.

Any one who has land of a similar character, ought not to hesitate a moment before getting one, as I am certain they cannot do otherwise than give satisfaction to all who may try them. I myself being a tile-maker, feel somewhat interested in draining, and advise all who wish to save their money to procure one of Mr. C.'s ditchers.

GEORGE JACKSON,
Supt. of New-York State Tile Works, Albany, N. Y.

[For the Country Gentleman and Cultivator.]

COARSE vs. FINE WOOL SHEEP.

MESSRS. EDITORS—In your issue of April 5th, I find a statement in relation to the profits of fine and coarse wooled sheep. Your correspondent says that his neighbor's long-wooled sheep sheared three pounds of wool apiece, and that his Spanish Merinos sheared four and a quarter pounds apiece. He says the long-wooled lambs were sold for $2 per head, and estimates his fine-wools also worth $2. He makes his 42 sheep produce $124.97, and his neighbor's (who I extremely pity) 20 sheep, but $54.80, and strikes a balance in favor of his fine-wools of the pretty sum of $40, and considers it quite an item, and so do I, unless we long-wooled men can do better than that.

Now as we are all looking after the dollars and cents, and as I am a little interested in long-wools, I propose to try my figures along side of Mr. Davis'.

I have sheared this year from my sheep at home, 22 in number, 152 lbs. clean washed and perfectly dry wool. Of the 22, 12 were breeding ewes from which I had 10 lambs—five were wethers and five yearling ewes. The five wethers sheared 41¾ lbs.—twelve ewes, 71 lbs.—five lambs, 41¼ lbs., making the 152 lbs., which is within two pounds of seven pounds apiece. Last year my wool brought me 32 cents per pound, which is probably about what it will bring this year, which will make 152 lbs., 32 cents per pound, $48.64—about $2.21 per head for the wool. Now in relation to the value of lambs, he sets down his fine-wool at $2, which is probably about right. I have not lately sold any lambs to the butcher, but have disposed of most of them for breeding, and if any males were left over I made wethers of them, and before they were two years old made them weigh from 200 to 230 lbs., when they could be sold to the butcher for from $16 to $20 per head, which I consider better than to sell them when lambs. I had a ewe this year that weighed, before she was two years old, 227 lbs. When I first commenced breeding sheep I used to sell some lambs to the butcher, but had no trouble to get from $3.50 to $5 per head for them, and could get that now; but I can do better with them.

And now for the test, and to do this honorably and fairly I propose to put the ewes and lambs in competition, and call their wool as my friend has done, an average of the flock, although Mr. Davis has the advantage in having but two lambs less on 27 ewes, when I have two less on 12.

Mr. Davis' 27 ewes, 4¼ lbs. wool per head, 42 cts. per lb..	$48.20
Do. 25 lambs, $2 per head,	50.00
Average wool and lambs, $3.64 per head.	$98.20
My 12 ewes, 7 lbs. wool per head, 83 lbs., 32 cts. per pound,	$26.88
10 lambs, $4 per head,	40.00
	$66.68
Average wool and lambs,	$5.57
	3.64
Balance in favor of Long-Wools, per head,	$1.93

Difference on 42 sheep, in favor of Long-Wools, would be $81.06.

Bethlehem, N. Y. JURIAN WINNE.

[For the Country Gentleman and Cultivator.]

EARLY MAY WHEAT.

FERNLEAF, MASON CO., KY., June 14, 1860.

EDS. CO. GENT.—"Early May Wheat" is now being cut. This variety has not varied two days in ripening in the last five years—never since its introduction from Tennessee. It has escaped all disease as usual, and samples No. 1 in quality, yet the yield is *very light* from winter killing of the plants. Many fields will not yield over ten bushels, and none over fifteen, so far as my observation extends. No rust nor joint worm, from which all other varieties are now suffering in the same vicinity. A friend in Hunterdon Co., N. J., writes me that his crop, from seed procured in Kentucky, winter killed in *spots*, but where it stood is very heavy, and longer in the straw than in this latitude, and will not, from present prospects ripen any in advance of Mediterranean sown on the same farm, and I see JOHN JOHNSTON says the same, as to *early ripening*, in New-York, in the Co. Gent. of June 7th. Mediterranean wheat is southern wheat, as well as "Early May," and when first brought here ripened June 15th, as the May now does; but it has grown 10 or 15 days later of late years, and is now subject to rust, from which it was at one time exempt.

Mediterranean wheat was first introduced in 1819, by Mr. JOHN GORDON of Wilmington, Delaware, and was shipped from *Genoa*, and was then the very earliest ripening variety known, and I believe yet is in the northern states. Of late years, and after it was adopted as a standard variety, other importations have been made, and I have no doubt but John Johnston and my Hunterdon Co. friend, have wheat from the later importations. It all goes to sustain my position before your readers for two years past, that for early maturity in wheat the grower must go *south* and not *north*, for seed—and that the change must be made every few years. Here the Mediterranean has lost its early maturing character, for the reason that it has not been renewed since 1819. An importation from Genoa would restore its original character here on this soil. Fresh importations I know have been made into New-York by the Messrs. Allens, and I see it advertised every year at Baltimore, newly imported. I hope your readers in New-York, Ohio and Pennsylvania, who ordered Early May, will report through your paper, their successes and failures, as soon after harvest as convenient. ANTHONY KILLGORE.

P. S.—I enclose samples of new wheat of the "Early May" variety. It is a very *short crop*, but better than any other variety, and imperfectly filled, yet the berry is of its usual good quality. It is a characteristic of Early May, that however the crop may *succeed or fail*, it always furnishes a *good sample*, and is No. 1 in quality, whether it produces a paying crop or otherwise. The wheat crop from the Ohio River valley to Texas, including the whole south, may safely be set down *as a failure*. After our next crop is sown, and our own people fully fed, nothing will be left for export. A. K.

[For the Country Gentleman and Cultivator.]

Growing Currants for Wine Making.

MESSRS. LUTHER TUCKER & SON—In your number of 29th March, P. G. asks what variety of currants are the best to make wine—how many to be planted on an acre, &c., and if it is profitable? I should have answered then, but want of time prevented me. Having now more leisure, and perceiving that no one has answered it as yet, I will give him the required information.

The red currant is the best to make wine from. One acre can be planted with from 1,214 to 2,730 currant bushes. This will produce yearly from 130 to 300 or 350 bushels of fruit, which, with water and the necessary quantity of sugar to induce fermentation, will make from 1,600 to 3,000 gallons of wine to the acre, worth from $1 to $1.50, and even more, per gallon. Thus each acre can be made to produce from $1,600 to $3,000 or $4,500, deducting the cost of sugar, casks, cultivation, mashing, refining, &c. This wine is of excellent quality—in all respects much like the wine from grapes; it sells readily, and much is exported to the West Indies and South America.

The cost of a plantation would not be very great, as any quantity of bearing currant bushes can be got at low rates, and the preparation of the land is not so expensive, and need not be so thorough as for a grapevine plantation; besides that, the plants can be made to produce the first year, which is not the case with the grapevine. Currant wine, when well made, is as good a wine as that made from the grape, but as the currant is deficient in saccharine matter, sugar is to be added to promote fermentation, which is indispensable to the formation of wine.

P. G., or any other, can further consult me for more particulars by writing me. F. A. NAUTS. *New-York.*

PLANTING FURIT TREES.—It is said that $800 worth of young fruit trees were planted in the town of Bennington, Vt., the last spring.

THE CULTIVATOR.

ALBANY, N. Y., JULY, 1860.

☞ Messrs. C. M. Saxton, Barker & Co., New-York, have issued a little book entitled "Outlines of the First Course of Yale Agricultural Lectures," consisting of the reports communicated at that time to one of the New-York dailies by Mr. HENRY S. OLCOTT. Conveying as the fullest of them do, only a simple outline of the general course of argument and fact presented, while even this was not at the time in all cases possible,—the value of the work is rather suggestive than practical; but as it has been revised with care by the reporter himself, and submitted for correction to the lecturers, one may consult it with entire confidence in its general fairness and accuracy. The already wide circulation which some of the reports have obtained by being copied from one newspaper to another, shows a public interest in the topics discussed, sufficient to lead to the conclusion that the present publication will exactly supply what the public most desire, a brief and condensed epitome embodying a considerable share of what was there actually said and done. There are some parts of the book, which we have already marked for extract.

In conclusion, Prof. JOHNSON suggests to the consideration of those who heard the lectures, and others, a scheme of simple experiments upon the use of Salt as a Fertilizer. It was thought that if similar experiments could be set on foot in different hands, scattered widely over the country, the result arrived at could not but possess considerable weight for study and comparison. The subject chosen, while it is one of general interest on which variant and conflicting opinions are held, is also one easily tried wherever salt can be cheaply procured. While we must refer to the book itself for Prof. Johnson's excellent prefatory observations, we copy here the four kinds of experiments which are to be carried on—hoping thereby to call greater attention to the subject, and taking the opportunity to say in addition that we shall be pleased to make our columns the medium of publishing the results of any trials which our readers may undertake. We fear, however, that to many the suggestion will come too late for action the present season.

SCHEME OF EXPERIMENTS.

A. General Effects of Salt—as increase of product, improvement of quality of crop, prevention of disease, &c.

Two plots of any soil in any crop—both may receive other manures or not; but their treatment should differ only in this fact, that one is salted, the other not. Use the salt at the rate of 350 lbs. per acre.

B. Effect on particular crops, or classes of crops, as potatoes compared with carrots, grasses vs. root-crops, root-crops vs. grain.

Two plots for each crop, as under A.

C. Effects of different doses:

Soil and crop alike—one plot unsalted, one with 75 lbs., one with 150 lbs., one with 300 lbs., one with 450 lbs., or other different quantities, less or more in number, as convenient.

D. Effects on different soils:

Soils different—tillage, manure and crop the same. Dose of salt the same. Of each soil a salted and unsalted plot should be observed.

☞ One may—by devoting a spare half hour or two to that interesting compilation of figures annually issued from the U. S. Treasury department under the title of "Commerce and Navigation,"—chance upon some items worthy of note. For example, this report for the fiscal year ending June 30, '59, shows that the Tea bill of this country for a twelve month was nearly *seven millions and a half of dollars*, for not quite 29 million pounds; but coffee is still more a national beverage, for we paid away over 25 millions dollars for 264 millions pounds of this simple little berry. To sweeten these drinks, and for other uses, we bought over 30 millions dollars' worth of sugar, beside expending five millions dollars more for molasses. We cannot grow good enough tobacco it seems, to supply our smokers, and so they pay away four millions and a half for the item of cigars, some fifty odd thousand for other manufactures of the "weed," and over a million and a half more for it in the raw state.

But the primary object of our reference to this table of imports, was to answer a query as to the amount we are paying for willow and willow ware of other peoples' growing and making—the inquirer having seen a much exaggerated statement on the subject, which, notwithstanding corrections already made, every little while takes a new start in the papers. We find that during the year in question

The total value of Manufactures of Willow, was.....	$125,677.00
do. do. unmanufactured Willow.....	38,359.00
Total Willow Imports,.....	$164,036.00

The aggregate of these items shown in the report for 1855, was $178,117, so that there appears during the intervening four years to have been a small decrease.

The value of our willow imports is not so great as that of the Honey we buy from Cuba, ($181,755,) while we also purchase some $15,000 worth of the latter from other sources. The larger part of our Willow, it may be added, comes from Bremen, (about $93,000;) and from the Atlantic ports of France, (about $45,000;) next stands Belgium with $14,500, and the remainder in small amounts from other scattered sources.

CHANGE OF SEED.—The Irish Farmer's Gazette says that "barley seed requires to be frequently changed; and if this is neglected, the result will be a deterioration in the quality, which, of course, lessens the value. The amount of produce from unchanged seed is always less than from changed seed, if the latter has been properly selected." In an article on the culture of Flax, the editor of the Irish Agricultural Review, says that a change of seed has proved "decidedly beneficial." A correspondent of the COUNTRY GENTLEMAN recently stated that he had found a change of oats so important, that he now imports his seed triennially from Prince Edward's Island.

☞ A Report of the Fourth Annual Fair of the St. Louis Ag. and Mech. Association, has just been published—prepared by Dr. HOPEWELL, to whom we are indebted for copies. It is a neatly bound volume of 228 pp., mostly devoted to a minute account of the exhibition referred to, the Reports presented, awards made, &c. We note, beside, an essay on the Culture of the Grape, to which the Association awarded a prize; portions of the late address of the Hon. A. B. DICKINSON, so far as we have yet published them in the COUNTRY GENTLEMAN, copied from this paper, and the excellent descriptive chapter on Apples contained in "Rural Affairs," to which volume credit for the same is courteously given.

NEW MODE OF DRAINING.—Mr. S. A. CLEMENS of Chicago, Ill., writes to the editors of the COUNTRY GENTLEMAN, that he "has an improvement on the mole plow, by which hydraulic cement mortar is forced down, and lines the inside of the subterranean tube made by the mole, simultaneously with its passage through the ground—in effect laying a continuous pipe of imperishable material to any suitable depth, and of any desired size or thickness with provision in operating the machine for making the underdrain of as true a grade of inclination as a railway can be laid—water having access to the drain through a fissure or perforations in the bottom." Where stones or roots are not too large or frequent, Mr. C. says he can put in the two inch pipe for 25 to 30 cents a rod.

☞ The Thirteenth Volume of Coates' Short Horn Herd Book, lately issued at London, contains the pedigrees of 1,730 bulls. Mr. Thorne's "Grand Turk" and Mr. Sheldon's "Grand Duke of Oxford," are among the bulls illustrated. Grand Duke of Oxford was bred by Capt. Gunter; got by 2d Grand Duke; dam, Oxford 11th, by 4th Duke of York, &c.

☞ At a late special meeting of the Franklin County, Mass., Agricultural Society, it was voted to purchase grounds at a cost of $5,000. It was also voted to dispense with the show of neat cattle this year, on account of the fatal disease, and the matter of exhibiting other stock was left with the trustees.

☞ The managers of the Montgomery Co., Pa., Ag. Society are moving to establish a Library at Norristown, for the use of its members.

HORSE SALES.—At the sale at Clappville, Mass., the 6th inst., of Horses belonging to R. S. DENNY, Esq., twenty animals brought an aggregate of $15,267—an average of $793 each. The highest prices appear to have been paid by E. D. Bush of Shoreham, Vt., viz., $3,450 for "Pocahontas" noted as a pacing mare, and $2,400 for an entire colt, "Miles Standish," four years old by Black Hawk out of Mary Taylor. "Ninon," a yearling filly from Pocahontas by Ethan Allen, brought $2,300, "John Alden," own brother to Miles Standish, one year younger, went for $1050, and "Garibaldi," two years old by Ethan Allen, also out of Mary Taylor, brought $1,000.

— Two Black Hawk mares were shipped from Boston for Liverpool the 7th inst., "purchased," says the Boston Cultivator, "for Rt. Hon. Lord Berwick by Sanford Howard. The mares are Fanny Fern (bay) and Black Hawk Belle (chestnut,) the former bred by Hon. Francis Wilson, of Hinesburgh, Vt., the latter by Mr. Titus, of Vernon, Vt., and lately owned by Mr. Warder, of Brattleboro.' They are regarded by good judges as remarkably fine animals, and should they reach their destination in safety, will do credit to the country as specimens of our roadsters."

— In connection with the foregoing, we may quote the statement apparently made "by authority" in the Spirit of the Times, that "Mr. Joseph Hall of Rochester, the owner of the famous stallion George M. Patchen, has recently refused $25,000 for him. He considers him worth $35,000." Since his recent exploits on the Union Course this horse appears to hold the "belt," as the champion of trotters the world over.

☞ Among the Devons disposed of at Mr. WAINWRIGHT'S sale, last week, at which, unexpectedly, we were prevented from being present,—we notice that "Helena 13th" was bought by Hon. WM. KELLY, for Mr. McCUTCHEON of Louisiana, for $200—also "Zerlina" and the bull "Wisconsin," for the same gentleman, at $160 each, and "Helena 18th," for $110, for E. R. BROWN of Mississippi. E. CORNELL of Ithaca, bought "Helena 16th" for $135.

☞ We are indebted to the publishers, C. M. Saxton, Barker & Co., New-York, for a copy of "The Young Farmer's Manual," by S. EDWARDS TODD, a full notice of which we are obliged to defer in the present pressure upon our columns.

☞ An advertisement of Callanan's Draining Plow, which we noticed editorially some weeks since, and to which a correspondent refers in another column, will be found elsewhere. Mr. C. states that he has added farther improvements since we witnessed its operation.

☞ Our friends of the Queens County Agricultural Society are making spirited preparations for their Show to be held at Jamaica, Sept. 19. President—Hon. E. A. LAWRENCE; Secretary, JOHN HAROLD, Hempstead.

☞ We have received the proceedings of the Executive Committee of the St. Lawrence County Ag. Society, at a meeting the 5th instant, to perfect arrangements for their Show, which takes place at Canton, Sept. 26–28. President, Hon. C. T. HULBURD; Secretary, L. E. B. WINSLOW. The Address is to be delivered by LUTHER H. TUCKER of Albany.

☞ The Racine Co., Wis., Ag. Society have issued a neat Schedule of Premiums for their exhibition at Union Grove Sept. 11–13—President, Dr. CARY, lately deceased; Secretary, G. Goodrich.

THE ST. LOUIS AG. AND MECH. ASSOCIATION are to open their next Fair on the last Monday of Sept. The leading premium is a sweepstake prize of $1,500 for the best roadster stallion to harness. Three premiums of $600 for the best thorough-bred bull, thorough-bred stallion and roadster stallion to harness; $300 for the second best, and $100 for the third best of each description of animals offered. All the other prizes are in keeping with the former fame of the association, and cover almost everything connected with the agricultural and mechanical world, embracing the fine arts, the floral kingdom, &c. The premium list amounts to upward of $24,000.

RENSSELAER COUNTY AG. SOCIETY.—This Society, by virtue of an act passed at the last session of the Legislature, have sold their show grounds at Lansingburgh, the buildings on which, it will be remembered, were burnt a year or two since, and have purchased new and more centrally located grounds, on which they are about to erect three buildings 45 by 100 feet, with a central part, 21 feet by 100, two stories high. Their Fair for this year, is to open on the 19th of Sept., and to continue for ten days.

☞ The Annual Exhibition of the New-Hampshire State Agricultural Society, is to be held in Manchester on the 2d, 3d and 4th of October.

MACHINE FOR SOWING LIME.—In Co. GENT., May 24, D. M. N. inquires about a machine for sowing lime. S. Hubbel, Unadilla, Otsego Co., N. Y., has invented a machine for sowing lime, plaster, ashes, and all kinds of grain, of any quantity desirable per acre, which I think would not fail to suit—price about $40. H. P. NORTON.

FARM GATE.—I send thanks to Dr. Robinson for the use of his drawings and models of a farm gate in your ANNUAL REGISTER for 1860. I believe it the best for the cost, in use. That Doctor must be a philanthropist, or he would have made a great spread, and gone to Washington three or four times for a patent, for truly it is much more worthy than three-fourths, or I might say nine-tenths of those *mighty creations* of the brain that get patented. L. R.

CULTIVATING CORN.—Now about plowing corn and surface cultivating. It is time that important subject was up again. Last season, while hoeing with our man Jake, I told him that some advocated a surface culture. He showed much surprise, and said—"Why, you must plow—must cut down and break the roots, or you will get no corn." I asked him for his reason—he said he did not know, but 'father said so.' Can it not be in a measure with corn as with some other plants, that when a root is cut off, two or three will start from it, and in the end add double to the nourishment? L. R.

☞ The Fourth National Exhibition of imported blood and American breeds of horses, will be held on Hampden Park, Agricultural Fair Grounds, in Springfield, Mass., the 4th, 5th, 6th and 7th of September. The existence of the Pleuro in cattle having led to the abandonment of the State Agricultural Fair, the Directors of the Hampden County Society promptly resolved to substitute a Fourth National Horse Show, and have appointed a Board of Managers, most of whom have served in the same capacity at the former successful Exhibitions. The list of premiums has been enlarged and classified, and it is designed, aside from the exhibition in itself considered, to give greater facilities for the deliberate examination and trial of *horses intended for sale.* Springfield is easily and quickly accessible from all directions, and Hampden Park is unequalled in its track for showing or training a horse.

PLASTER FOR POTATOES.—Four years ago we planted part of a field with potatoes—first quarter acre, to which we applied a moderate dressing of gypsum—then a quarter acre without it, and then again a larger area with it. The effect was very apparent on the potato crop, in favor of that part to which the gypsum was applied; and the clover, which is now on the ground, shows to the foot what was plastered and what was not. That which was plastered, presents a dark green appearance, and a much heavier growth than the other, which is also much paler in color. D. M. NESBIT. *Union Co., Pa.*

☞ ASA U. SUTTON, of Tecumseh, Mich., informed me not long since, by letter, that he raised in two years planting one hundred and thirty five bushels, good measure, of Prince Albert potatoes, from one that I gave him. If any one has exceeded this we would like to hear from him. *Clinton Corners, N. Y.* A. M. U.

CASHMERE GOATS.—The company who are breeding these goats in Tennessee, the papers state have recently sold six of them at $1,000 each—one to Mr. Fry of Louisiana—a pair to Dr. Cornet of Logan Co., Ky.—a pair to W. E. Douglass of Texas, and one to Mr. Davis of Mecklenberg Co.

Chinese Sugar Cane.—The Cincinnatus, for last month, states that R. Peters, of Atlanta, Ga., (who is one of the persons that first cultivated the *sorghum* plant in this country, and who went into the business on a large scale for several years, under the sanguine expectations of ultimate success,) has at last given up its cultivation. He is satisfied that, for cattle feed, its stalks are not superior to Indian corn, while its seed is injurious. As a producer of sirup, it will not compete with the common sugar cane in the South; but where fuel is plenty, in some of the northern States, it may be cultivated with economy for this purpose.

Depth of Planting Corn.—A correspondent of the Country Gentleman, writes to this paper under date of Bloomington, Ill., May 26: "I take your recent advice to correspondents to write whilst the matter is fresh on the mind. I have this week been engaged replanting corn, and am persuaded that the proper depth for planting corn is to be determined by the mellowness and richness of the ground, allowing for the dry or wet state of the weather; for poor hard soil, dry one inch; wet, two inches; on rich loose soil, dry two inches, on wet, three inches."

Hay Required for Cows.—Otis Brigham of Westborough, Mass., after 70 years' experience in farming, says in the N. E. Farmer, that good cows will eat on an average 20 lbs. of hay per day, when giving milk, and 15 lbs. when dry—not by guess work, but tested by actual weighing for months at a time. They will pay well for their keeping, by an average of 6 qts. of milk per day through the year. He estimates summer pasture at 50 cents a week, and milk at 3½ cents a quart.

Col. Pratt's Butter Dairy.—The yield per cow at this dairy, for the year 1859, as furnished for the Journal of the State Ag. Society, is 164 pounds. The profit of this department of the farm is stated at $938; the labor and interest on capital invested $1,550.

Scratches in Horses.—A correspondent of the N. E. Farmer, says that what is called "bright varnish," sold at paint shops, is a sure cure for scratches, and that he has used it for cuts on human flesh with remarkable success.

Seeding with Oats.—You state that "seeding down with oats is rarely successful." We in these parts seed most of our oat ground down with grass, (clover and timothy,) and it does very well, with but few exceptions.

J. T. H.

☞ It is stated in the papers that P. G. Gardiner of Schoharie Co., N. Y., owns a half and half Durham and Hereford, now about 2½ years old, which weighed 1,770 pounds when 28 months old.

Mixed Stock in Pasture.—In a letter to the Ohio Farmer, John Johnston gives his views on this subject—one upon which considerable remark has been had in agricultural journals. He says: "I have found sheep to do very well among cattle, but cattle do badly among sheep. Cattle do well where horses pasture, but horses will not eat what cattle leave very readily. Horses and sheep do well together, especially the sheep."

Wire-Worms Trapped.—The Ohio Cultivator tells of a farmer, who spread a quantity of short straw from the threshing machine on land badly infested with wire-worms, and plowed it in. It was planted to potatoes, and on digging them in the fall, they were found uninjured by the worms, which were found to have crawled into the straw, one more in each piece until stopped by the joint, where they perished—"not having sense enough to back out, he had them by the million, and was never afterward troubled with them on the field."

☞ The Journal of the N. Y. State Ag. Society announces that the Hon. Josiah Quincy, Jr., of Boston, has accepted an invitation from President Huntington to deliver the Annual Address at the coming Elmira Fair.

☞ The "Susquehannah and Chemung Valley Horticultural Society" has issued the prize list of a Summer Exhibition, to take place at Havana, Schuyler Co., June 20 and 21—President, Col. E. C. Frost; Secretary, E. P. Brooks, Elmira.

UNLOADING HAY.

Eds. Co. Gent.—In your issue of the 17th May, I see an article on unloading hay by L. F. Scott. In a ramble at New-Lebanon, Col. Co., N. Y., among the Society of Shakers, I came across one of the best methods of unloading, in use by them, I ever yet have seen.

Directly over the mow, is attached to the rafters a tackle block; and on the barn floor a similar one, a rope of ample dimensions passing through these two, and on one end is fastened what they term gang hooks. The two hooks being connected by a few links with a swivel, when stretched apart will measure some five feet. Set them in the load with tines inclining inwards, and consequently the harder the draft the better they hold. I have seen a yoke of oxen draw to the top of the barn, a load at *three* hook fulls. The upper blocks being over the middle of the mow or bay, enables a man to swing it at any place he may choose. This is the cheapest and most expeditious method in use, of ganging hay. G. H. Gregg.

A FLY-PROOF WHEAT.

Zanesville, Ohio, June 16, 1860.

I send you herein two heads of a fly-proof wheat, lately introduced into this county from Hardin county, and called here the "Hardin Co. Wheat." Perhaps you may recognize the wheat, and give its proper name. Several years since, a farmer walking through his wheat-field in Hardin county, to examine whether it was worth cutting, found the midge had taken so nearly all that it was not worth cutting—indeed seemingly all gone. But he observed two heads that looked full, and different from the others. He cut them, and planted the seed in his garden. From this beginning has sprung this variety—so goes the story. You will observe that the wheat is smooth—red chaff, and the caps so closely constructed as not to admit the fly. I examined a number of fields to-day, (in a drive of 14 miles,) of this wheat, and did not find the first head destroyed by fly, while the other varieties, Blue Stem, &c., were much damaged, some badly. I thought the information worth communicating. Isaac Dillon.

P. S.—The prospect for wheat in this county is good, as it is for all crops—grass, corn, potatoes and fruit.

THREE VALUABLE RECEIPTS.

The following are furnished for the Country Gentleman, from a source which authorises that personage to commend them unhesitatingly to the attention of his numerous lady admirers:

Composition Cake.

One pound and a half of sugar.
One pound and a quarter of butter.
One pound and three-quarters of flour.
One cup of milk.
One teaspoonful of soda.
Six eggs.
One wine-glass of brandy.
Fruit to your taste.

Jumbles.

Half a pound of sugar.
Half a pound of butter.
Half a pound of flour.
Flavor with cinnamon.

Chocolate Custard.

A quarter of a pound of spiced chocolate.
One quart of milk.
Two eggs.
One cup of sugar.

Grate the chocolate, and stir into the milk when *nearly* boiling. When it begins to thicken, add the eggs and sugar. Let it boil a few minutes, stirring it constantly. L.

BIRDS INJURIOUS TO BEES.—I have heard it remarked that King-Birds were in the habit of destroying large numbers of honey-bees, in fact almost feeding upon them. Is such the case, and can some bee-keeper inform me? A. W. A.

EMERY'S PATENT

RAIL ROAD HORSE POWER

AND OVERSHOT

Threshing Machine and Cleaner Combined,

MANUFACTURED BY

EMERY BROTHERS,

PROPRIETORS OF THE

ALBANY AGRICULTURAL WORKS,

No. 62 & 64 State Street,

ALBANY, N. Y.

The annexed Horse Power has been before the public for nearly ten years, and met with unexampled success for its general adaptability to every desirable degree of force and motion required for the numerous wants of the Farmer and Mechanic, also for its ease of operation and durability, and has gained a world-wide reputation which is not enjoyed by any other Horse Power extant—all which is a sufficient guarantee of its value, without a detailed description in this notice.

THE THRESHING MACHINE AND CLEANER COMBINED,

As represented in the annexed Cut, cannot claim so long and extended an introduction and general adoption as the horse-power; but its uniform success at every and numerous fairs where exhibited, and an extensive introduction and sale during the past two harvests, has demonstrated its superiority over all its competitors as well as all similar machines heretofore made by the proprietors, and entitles it to the following detailed notice.

This machine combines all the advantages of the common Thresher with the over-shot cylinder, adjustable concave and changeable features, for left or right hand working, so long manufactured by the proprietors. It also has the journals of its cylinder hung in universal boxes or bearings, thereby always avoiding any binding and friction between them.

This machine is furnished with a Fan, placed beneath the feeder's table, which is driven by an outside pulley, over which the main band passes and drives it in its circuit from the Horse-Power to the pulley of the threshing cylinder. A Shoe, with screens and sieves, is also placed partly under and after the cylinder, and is similar to that in a common hand grain fanning-mill, except the sieves and screens, which are all of an improved and peculiar construction.

This frame-work is extended some six to eight feet in length aft the center of the cylinder, and is lined up its sides, and covered over the top. Within this extended and enclosed portion of the frame are placed a light wood riddle, filling the whole area, and with a close wood bottom directly beneath it. Both riddle and bottom receive a vibratory motion endwise, but in contrary directions, so that while the riddle serves to separate the straw from the grain, and carry it off at the extreme end, the tight bottom serves to convey rapidly and steadily the chaff and grain which has fallen from the riddle upon it, back towards the cylinder, and discharging it directly upon the finger-board of the shoe.

Among the most important improvements introduced by the proprietors in their machine, and which have given it its wide celebrity and its extensive use during the last two harvests, are the following, which need but be known to be appreciated.

First, an endless apron of canvas, with hard wood slats extending crosswise the machine, which are about two inches wide and two inches from centers, and three-eighths of an inch thick, and confined edgewise to the endless apron, and with lugs at the ends, so as to form cells between the slats when moving in a plane, for receiving, holding and conveying the grain, while the straw and coarse chaff are suspended upon their edges and from the grain in the cells. This apron is placed immediately at the discharging side of the cylinder, and at an inclination upwards and nearly parallel with the inclined portion of the top of the machine, as seen in the cut.

It is well known that in all over-shot machines the grain and straw are discharged at different angles, the grain taking a more downward direction, while the straw is carried higher and farther from the machine, and if allowed would strike the floor separately, and form almost a perfect separation in the operation.

This endless apron is so placed in relation to the cylinder, as to avail itself of this described first and almost perfect separation of the grain and straw, making at a low estimate Ninety Per Cent of the entire separation at this point. The apron moving rapidly in the same direction with the grain, the concussion upon its slats is so slight as not to fracture the kernels of the most tender kinds of grain, and causes little or no wear upon the slats from the same cause. At the upper end of this apron, the grain from the cells falls directly upon the inner end of the tight bottom, by which it is conducted with the riddled grain to the shoe as before described, while the straw is caught by a revolving beater with strong iron teeth, which teeth, as it revolves, are projected outward, and comb rapidly forward the straw, tossing and opening it for the free discharge of any grains which may be retained in it. These teeth, on their circuit with the beater, recede within the beater at each revolution during the returning part of its circuit, thereby avoiding the possibility of clogging or winding of the straw upon it.

Another feature is several series of wood fingers, lying within and upon the straw riddle: these fingers are about twenty inches long, and with each vibration of the riddle, are made to rise and fall several inches, thus virtually suspending the straw and agitating it at the same time. These fingers are very light, and move without noise, and require but a moiety of force for their action.

This machine, as shown by its frame work, is found sufficient for

threshing and cleaning perfectly all hard grains, but when light grains are to be threshed, and the work to be crowded, there is an extension which is attached if desired, and is shown attached in the cut. When not in use, or being transported, this extension may, with the side-boards and pulleys, which appear above the main frame, be detached and packed within the space inside the main frame, and the top, as seen, allowed to drop down upon the frame itself, thus making a compact and safe machine for transportation, while it is simple of adjustment for any person of ordinary capacity.

The grain as it is thrashed, is discharged by two spouts, one for the cleaned grain, and one for the tailings and partially cleaned grain—and, when ordered, an elevator for returning the tailings back to the riddles, &c., is attached, and for many kinds of grain is found a great labor saving attachment, and requires also but a slight force to keep it in motion.

Price of these Improved Machines, in setts complete,....	$250.00
Price of Horse-Power, Endless Chain or Lever principle,.	120.00
Price of Threshing Machine and Cleaner combined,.. ...	130.00
Price of sett of Bands and Extras,.....	5.00
Price of Elevator for tailings, (always an extra charge,)..	10.00

For further particulars and descriptions, see the recently published Illuminated Catalogue of the Albany Agricultural Works, which is furnished gratis on application and receipt of three cents to prepay postage on same. Local agents solicited where none are now appointed, to whom liberal discounts will be allowed. Address

EMERY BROTHERS,

July 5—w&mlt. No. 62 and 64 State St., Albany, N. Y

FARM FOR SALE OR EXCHANGE.

The subscriber has a farm containing 100 acres situated in Prince Wm's Co., Virginia, which he wishes to sell, or exchange for a blacksmith's stand, or a small farm in the State of New-York. For further particulars address

WM. WAKEFIELD,
June 28—w2m1t.* Occoquan, Prince Wms. Co., Va.

THOROUGH-BRED AYRSHIRES AND NORTH DEVONS FOR SALE.

The undersigned having offered his residence for sale, will dispose of his entire stock of Thorough-Bred Cattle at reduced rates, in lots to suit purchasers. There are several animals of great merit in this herd, which are only rarely to be secured. Will also sell his stock of Horses and Colts, including three of the best Stallions of their age that can be shown. For particulars address

ALFRED M. TREADWELL,
Madison, Morris Co., New-Jersey,
June 28—w4tm2t. or 45 Fulton-st., New-York City.

THE ALLEN MOWING AND REAPING MACHINES.

THE BEST IN THE WORLD. The Mower has been for many years the leading one in this country. It has been oftener victorious in honest trials among intelligent farmers, than any other. It has also become the leading Mower in Great Britain and France. In the severest tests ever applied to mowers in Europe, it has easily beaten all competitors. The Emperor Napoleon has several Allen Mowers at work on the Royal farms. Eminent agriculturists in various parts of Europe give them the preference over all others.

They are celebrated for light draft, perfection and rapidity of work, simplicity, great strength and durability. A platform can be attached at the expense of $10, which makes them the best and most economical reapers in use.

Grain Cradles and Scythes for meadows and lawns.

Horse and hand, hay and gleaning rakes, with steel and wood teeth, with and without wheels. Unloading forks, by the use of which a horse is enabled to do the severest work of the season.

THRESHERS AND WINNOWING MACHINES AND HORSE POWERS.

Cider, Wine and Fruit Mills and Presses.

Corn Shellers and Hay Cutters for hand and horse power.

Every description of Agricultural and Horticultural Implements.

FIELD, GARDEN, AND FLOWER SEEDS—a full assortment.

FERTILIZERS—Peruvian and American Guano, Bone Dust, &c., &c.

R. L. ALLEN, 189 & 191 Water.st, New-York.
June 14—w3—m1t.

SCHENECTADY AGRICULTURAL WORKS.

The Proprietors of these Works manufacture

LEVER POWERS for from Four to Eight Horses.

ENDLESS CHAIN POWERS for One, Two and Three Horses.

COMBINED THRESHERS AND WINNOWERS.

THRESHERS with Vibrating Separators.

CLOVER MACHINES, WOOD SAWS, and DOG POWERS.

Also MALES' PATENT CONVERTIBLE CORN SHELLER AND CIDER MILL, which is a very desirable machine for farmers, and will compare favorably with any other machine in either shelling corn or grinding apples for cider.

Full descriptions of all these machines, prices and terms, may be found in our Descriptive Circular, which will be furnished to all applicants.

We give below a statement relative to our Two-Horse Endless Chain Powers and Combined Threshers and Winnowers, made in course of correspondence by Volney Beinap, of North East, Pa. It gives a fair idea of their capacity when well operated. He says of his machine, which is the first of four sent into that neighborhood, the first one you sent is thought rather the best:

"I have threshed 108 bushels of wheat in 2 hours and 59 minutes, without stopping, and not a wet hair on my horses. I also threshed 140 bushels of oats in 1 one hour and 35 minutes, and the oats very damp at that."

FOR CIRCULARS

Or any desired information relating to these machines, address

G. WESTINGHOUSE & CO.,
May 24—weow6tm2t. Schenectady, N. Y.

STEEL PLOWS.—We are manufacturing

for the spring trade large numbers of our Mohawk Valley Clipper Plows with steel mold-board and land-side, with steel or cast point, as desired, and would refer you to the following persons, who have them in use:

John Johnston, Geneva, N. Y.
J. Ingersoll, Ilion, N. Y.
Wm. Summer, Pomaria, S. C.
R. C. Ellis, Lyons, N. Y.
Col. A. J. Summer, Long Swamp, Florida.
A. J. Bowman, Utica, N. Y.
A. Bradley, Mankato, Minesota.
F. Mackie, Utica, N. Y.

We are also manufacturing Sayre's Patent Horse Hoe and Potato Covering Machine, Sayre's Patent Cultivator Teeth in quantities for the trade; and all kinds of steel and swage work in the agricultural line. Send for a circular.

SAYRE & REMINGTON,
Jan. 26—wtf Mar. 1—mtf. Union Agricultural Works, Utica, N. Y.

AGRICULTURAL IMPLEMENTS.

HORSE HOES, expanding.
CIDER MILLS AND PRESS.
CORN SHELLERS, various kinds.
EXCELSIOR FAN MILLS, three sizes.
STALK AND HAY CUTTERS.
GRAIN CRADLES AND HORSE RAKES, &c., &c.

For sale by A. LONGETT,
May 1—m3t 34 Cliff street, New-York.

INVENTION TRIUMPHANT!

The Cost of Draining Reduced One-Half

BY THE USE OF

CALLANAN'S DITCH DIGGER AND SUBSOILER.

PRICE, with wheels, axle-tree and reversable tongues, $50. Satisfaction warranted. Also SHOVELS, made expressly to be used in connection with the Ditcher—just the thing—Price $1.50.

Address D. CALLANAN
June 21—w13tm3t* Callanan's Corners, Albany Co., N. Y.

DRAIN TILE.—The subscribers are prepared to furnish DRAINING TILE of the first quality, cut 14 inches in length, with a calibre—have on hand in large or small quantities for Land Draining, ROUND, SOLE AND HORSE-SHOE TILE. We warrant every Tile to be hard burned and perfectly round.

Orders from all parts promptly attended to, and practical Drainers furnished if required.

We will not be undersold by any manufacturer in the United States.

☞ Price List sent on application.

All Tile delivered free of charge on board cars or boat, in this City. Factory on the Western Plank Road near the Asylum.

McBRIDE & CO.,
May 24—wtfm2t (formerly Artcher & Alderson,) Albany, N. Y.

ALBANY TILE WORKS,

CORNER CLINTON AVENUE AND KNOX STREET, ALBANY, N. Y.

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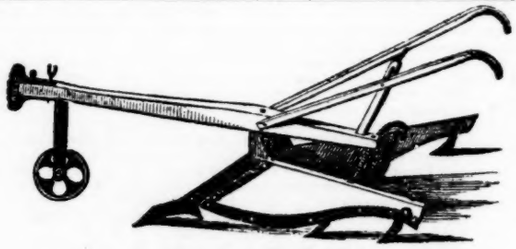

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